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From: Commandant of the Marine Corps
To: Distribution List

Subj: UC-20G TRAINING AND READINESS MANUAL

Ref: (a) NAVMC 3500.14C

Encl: (1) UC-20G T&R Manual

1. Purpose. In accordance with reference (a), enclosure (1) contains revised standards and regulations regarding the training of UC-20G aircrew.

2. Scope. Highlights of major Training and Readiness (T&R) planning considerations included in this UC-20G T&R Manual are as follows:

    a. Adjusted format and content to align with standards and regulations per reference (a).

    b. Removed Basic Instructor Pilot Designation.

    c. Updated prerequisite fixed-wing hour requirement for each Program of Instruction (POI).

    d. Added a simulator event to the Functional Check Flight POI.

3. Information. Recommended changes to this Manual should be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General (CG), Training and Education Command (TECOM), Marine Air Ground Task Force Training and Education Standards Division (MTESD) (C 466), Aviation Standards Branch using standard Naval correspondence or the Automated Message Handling System plain language address: CG TECOM MTESD.

4. <u>Command</u>.   This Manual is applicable to the Marine Corps Total Force.

5. <u>Certification</u>.   Reviewed and approved this date.

J. W. LUKEMAN
By direction

DISTRIBUTION: PCN 10031981400

CHAPTER 1

UC-20G TRAINING AND READINESS REQUIREMENTS

CHAPTER 1

UC-20G

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

1.1 <u>MISSION</u>. Provide time-sensitive air transport of high priority passengers and cargo to, within, and between theaters of war.

1.2 <u>TABLE OF ORGANIZATION (T/O)</u>. As of this publication date, C-20G OSA units for the Active Forces and Reserve Forces are authorized:

Table of Organization C-20G			
Squadron		Detachment	
1 C-20G		1 C-20G	
PILOTS	8	PILOTS	6
CC	4	CC	3
LM	4	LM	3

1.3 ABBREVIATIONS

CORE SKILLS	
CACT	COMMAND AIRCRAFT CREW TRAINING
SFAM	SIMULATOR FAMILIARIZATION
FAM	FAMILIARIZATION
INST	INSTRUMENT
IOE	INITIAL OPERATING EXPERIENCE
T2P	TRANSPORT SECOND PILOT
TAC	TRANSPORT AIRCRAFT COMMANDER
MISSION SKILLS	
OSA	OPERATIONAL SUPPORT AIRLIFT

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

C-20G		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.4.1.2	**OSA**	Conduct Operational Support Airlift

1.5 <u>MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION</u>.

C-20G							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.4.1.2	OSA		X				

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

C-20G							
Mission Essential Task To Core/Mission/Core Plus Skill Matrix							
MET	CORE SKILLS 2000 PHASE			MISSION SKILLS 3000 PHASE		CORE PLUS 4000 PHASE	
						SKILLS	MISSIONS
	T2P	TAC		OSA			
OSA	X	X		**X**			

1.7 <u>MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS</u>. The following MET output standards are the required level of performance a C-20G unit must be capable of sustaining during contingency operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable C-20G unit is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 5.0 hour average sortie duration. It assumes >70% FMC aircraft and >90% T/O aircrew on hand. If unit FMC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like percentage.

C-20G				
Output Standards - 1 Aircraft				
CORE				
MET	SKILL	MET	OUTPUT STANDARD	
			MAXIMUM MCT SORTIES	MAXIMUM DAILY SORTIES
MCT 1.3.4.1.2	OSA	Conduct Operational Support Airlift	**2**	2

1.8 <u>CORE MODEL MINIMUM REQUIREMENTS (CMMR) TRAINING STANDARDS FOR READINESS REPORTING (DRRS-MC)</u>. The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to execute the MET training standards and MET observed standards of para 1.9. MCO 3000.13 Readiness Reporting and Chapter 7 of the Aviation T&R Program Manual provide additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System – Marine Corps (DRRS-MC).

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

C-20G CMMR for READINESS REPORTING						
CREW POSITION BASED UPON DETACHMENT - 1 Aircraft						FORMED CREWS
CORE						
MET	ABBREVIATION	T2P	TAC	CREW CHIEF	LOADMASTER	
MCT 1.3.4.1.2	OSA	3	3	3	3	3
COMBAT LEADERSHIP						
DESIGNATION					1 Aircraft	
TRANSPORT AIRCRAFT COMMANDER (TAC)					3	
TRANSPORT SECOND PILOT (T2P)					3	
CREW CHIEF (CC)					3	
LOAD MASTER (LM)					3	

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

C-20G CMTS				
CREW POSITION BASED UPON UNIT - 1 Aircraft				
CORE SKILLS (2000 Phase)				
CORE SKILL	T2P	TAC	CC	LM
T2P	3	3		
TAC	3	3		
MISSION SKILLS (3000 Phase)				
MISSION SKILL	T2P	TAC	CC	LM
OSA	3	3	3	3

1.10 INSTRUCTOR DESIGNATIONS. For normal operations (not deployed for contingency operations).

C-20G SQUADRON CMTS (1 A/C)			
INSTRUCTOR DESIGNATIONS (5000 PHASE)			
DESIGNATIONS	PILOTS	CC	LM
ANI (ASSISTANT NATOPS INST)	1	1	1
NI (NATOPS INSTRUCTOR)	1	1	1
INSTRUMENT EVALUATOR	3	N/A	N/A

1.10.1 C-20G DEPLOYED DETACHMENT. A deployed C-20G Detachment for contingency operations should possess the following numbers of personnel with the instructor designations listed in the matrix.

C-20G DEPLOYED DETACHEMENT CMTS (1 A/C)			
INSTRUCTOR DESIGNATIONS (5000 PHASE)			
DESIGNATIONS	PILOTS	CC	LM
ANI (ASSISTANT NATOPS INST)	1	1	1
NI (NATOPS INSTRUCTOR)	1	1	1
INSTRUMENT EVALUATOR	3	N/A	N/A

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

C-20G CMMR/CMTS (1 A/C)			
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (6000 PHASE)			
DESIGNATION	PILOTS	CC	LM
T2P	3		
TAC	3		
FCF	2	1	1
CC		3	
CCI		1	
CCANI		1	
CCNI		1	
LM			3
LMI			1
QUALIFICATION	PILOTS	CC	LM
NATOPS	6	3	3
STANDARD INSTRUMENT	6		
SPECIAL INSTRUMENT	2		

APPENDIX A

SIX FUNCTIONS OF MARINE AVIATION

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

APPENDIX B

T&R CORE DEFINTIONS

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

CHAPTER 2

UC-20G PILOT/7553
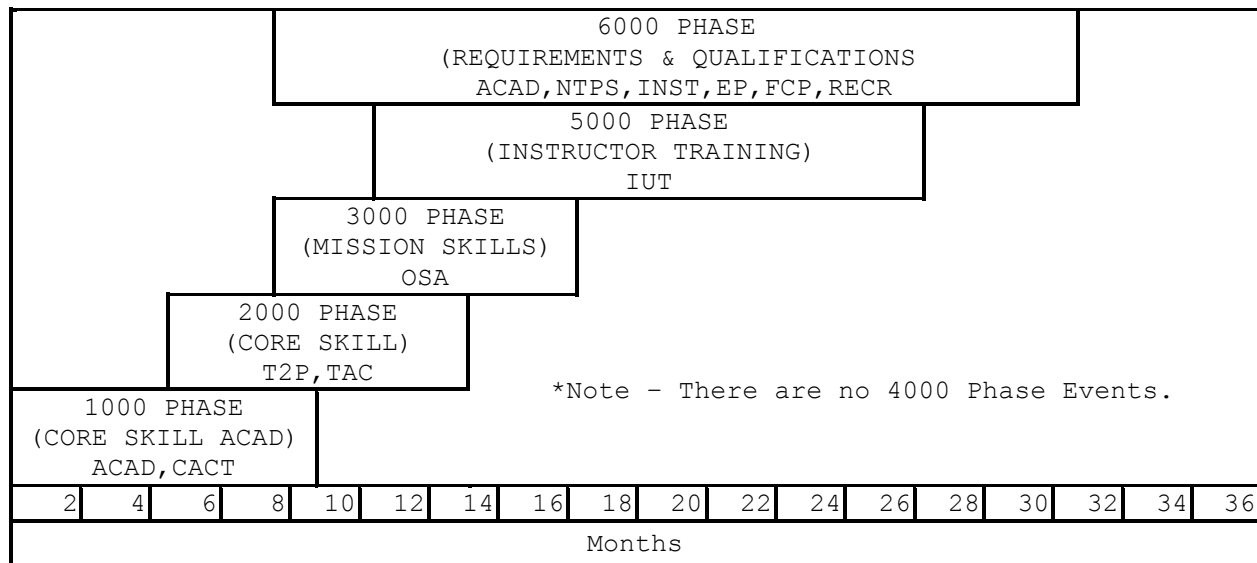
CHAPTER 2

UC-20G PILOT/7553

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

2.1 <u>TRAINING PROGRESSION MODEL</u>.

    Represents the recommended training progression for the C-20G pilot.

    Represents minimum-to-maximum time-to-train by Phase.

    Units should use the model as a guide to generate individual training plans.

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│          ┌──────────────────────────────────────────────┐             │
│          │              6000 PHASE                        │            │
│          │       (REQUIREMENTS & QUALIFICATIONS           │            │
│          │      ACAD,NTPS,INST,EP,FCP,RECR                │            │
│       ┌──┴─────────────────────────────────────┐─────────┘            │
│       │            5000 PHASE                    │                     │
│       │        (INSTRUCTOR TRAINING)             │                     │
│       │              IUT                         │                     │
│    ┌──┴──────────────────────────┐──────────────┘                     │
│    │         3000 PHASE           │                                    │
│    │      (MISSION SKILLS)        │                                    │
│    │            OSA               │                                    │
│ ┌──┴──────────────────┐──────────┘                                    │
│ │     2000 PHASE       │                                              │
│ │     (CORE SKILL)      │      *Note – There are no 4000 Phase Events. │
│ │       T2P,TAC         │                                             │
│ ├──────────────┐───────┘                                              │
│ │  1000 PHASE   │                                                     │
│ │(CORE SKILL ACAD)│                                                   │
│ │   ACAD,CACT    │                                                    │
├─┴──┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬──┤
│  2 │ 4 │ 6 │ 8 │10 │12 │14 │16 │18 │20 │22 │24 │26 │28 │30 │32 │34 │36│
├────┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴──┤
│                              Months                                   │
└──────────────────────────────────────────────────────────────────────┘
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2.2 <u>PROGRAMS OF INSTRUCTION (POI)</u>

2.2.1 <u>General</u>. Represents the time-to-train by Phase.

    Aviators must have a minimum of 500 fixed wing hours to be assigned to any POI in this T&R.

    Aviators that have been previously designated a C-20G TAC and are returning to a DIFOP status should be assigned to the Refresher (R) POI.

    Final determination of a training track for a pilot will be at the discretion of the individual command.

2.2.2 <u>Basic (B) POI</u>. Pilots assigned to the (B) POI shall fly the entire syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1-12	Core Introduction Training	CACT/VMR Det
13-52	Core/Mission Training	CACT/VMR Det
52-104	TAC/FCP Under training	CACT/VMR Det
104-	IP Under Training (IUT)	CACT/VMR Det

2.2.3 <u>Refresher (R) POI</u>. The Refresher Series represent pilots who have previously flown the C-20G. Refresher Pilots shall fly those events annotated with an R. A previously qualified Gulfstream pilot (civilian or military other than the C-20G)are considered a series conversion and should complete events with an SC. Commanding officers/OICs will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Pilot with a view towards combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1-5	Core Introduction Training	CACT/VMR Det
6-12	Core Skills Basic	CACT/VMR Det
12-26	Mission Training	CACT/VMR Det
26-52	TAC/FCP Under Training	CACT/VMR Det

2.2.4 <u>Series Conversion (SC) POI</u>. A previously qualified Gulfstream pilot (civilian or military other than the C-20G)are considered a series conversion and should complete events with an SC.

WEEKS	COURSE	PERFORMING ACTIVITY
1-5	Core Introduction Training	CACT/VMR Det
6-12	Core Skills Basic	CACT/VMR Det
12-26	Mission Training	CACT/VMR Det
26-52	TAC/FCP Under Training	CACT/VMR Det

2.2.5 <u>Instructor Pilot Under Training (IUT) POI</u>. The pilot must have 1,000 hours of fixed wing flight time and 100 hours flight time as a Transport Aircraft Commander (TAC) in the C-20G in order to be nominated by the Standardization Board for this POI.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	INSTRUCTOR GROUND SCHOOL	CACT/VMR Det
3-4	ANI/NI INSTRUCTOR PILOT TRAINING	CACT/VMR Det

2.2.6 <u>Academic Training</u>. 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.

COURSE	PERFORMING ACTIVITY
CORE INTRODUCTION TRAINING GROUND SCHOOL	CACT
RECURRENT PHASE ACADEMICS	CACT
ACPM TRAINING	MAWTS-1

2.2.6.1 <u>Aircrew Training References</u>. Aircrew shall use the following references to ensure safe and standardized training and maintenance procedures, grading criteria, and aircraft operation:

Federal Aviation regulations/Aeronautical Information Manual (FAR/AIM)

OPNAVINST 3710.7_ NATOPS General Flight and Operating Instructions

OPNAVINST 1542.7_ Crew Resource Management (CRM) Program

OPNAVINST 4790.2_ Naval Aviation Maintenance Program (NAMP)

NAVMC 3500.14_ Aviation Training and Readiness Manual (T&R)

NAVMC 3500.93_ C-20G Aviation Training and Readiness Manual (T&R)

MCO 3500.27_/OPNAV 3500.39_ Operational Risk Management (ORM)

MAWTS-1 Aviation Career Progression Model (ACPM Training)

NAVAIR 01-C20GAAA-1 U.S. Navy C-20G NATOPS Flight Manual (NFM)

Gulfstream Aerospace Corporation G-IV manuals

2.3 <u>PROFICIENCY & CURRENCY</u>

2.3.1 <u>Proficiency</u>. Proficiency is a measure of achievement of a specific skill. Refly factors establish the maximum time between demonstration of those particular skills. To regain proficiency, an individual shall complete the delinquent events with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with an instructor from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, the instructor shall regain proficiency with another aircraft commander or as designated by the commanding officer.

2.3.2 <u>Currency</u>. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in Chapter 3 of the Aviation T&R Program Manual.

2.4 <u>INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS</u>

2.4.1 Management of individual CSP serves as the foundation for developing proficiency requirements.

2.4.2 Individual CSP is a "Yes/No" status assigned to an individual by Core Skill. When an individual attains and maintains CSP in a Core Skill, the individual counts towards CMTS Unit CSP requirements for that Core Skill.

2.4.3 Proficiency is attained by individual Core Skill where the training events for each skill are determined by POI assignment.

2.4.4 Once proficiency has been attained by Core Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the maintain table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Core Skill.

Note
Individuals may be attaining proficiency in some Core Skills while maintaining proficiency in other Core Skills.

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

C-20G PILOT ATTAIN AND MAINTAIN CORE SKILL PROFICIENCY (2000 Phase)						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN POI
			BASIC POI	SERIES CONV. POI	REFRESHER POI	
T2P	T2P	INTRO TO LEFT SEAT OPERATIONS	2101			2101
	T2P	NIGHT OPERATIONS	2102			
	T2P	NATOPS/INST REVIEW FLIGHT	2103	2103	2103	
TAC	TAC	INTRO TO TAC	2201	2201	2201	2201
	TAC	PRACTICE TAC RESPONSIBILITIES	2202	2202	2202	
	TAC	LOFT	2203	2203	2203	

NOTE
Specific Maintain events are selected by community SMEs to update corresponding
skills in the Attain table. Maintaining proficiency in these select events will
ensure the individual will never go delinquent in that corresponding skill in the
Attain table.

2.5 <u>INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS</u>

2.5.1 Management of individual MSP serves as the foundation for developing
proficiency requirements in DRRS-MC.

2.5.2 Individual MSP is a "Yes/No" status assigned to an individual by
Mission Skill. When an individual attains and maintains MSP in a Mission
Skill, the individual counts towards CMMR-RR Unit MSP requirements for that
Mission Skill.

2.5.3 Proficiency is attained by individual Mission Skill where the training
events for each skill are determined by POI assignment.

2.5.4 Once proficiency has been attained by Mission Skill (by any POI
assignment) then the individual maintains proficiency by executing those
events noted in the Maintain table and in the Maintain POI column of the
Attain and Maintain Table. An individual maintains proficiency by individual
Mission Skill.

Note
Individuals may be attaining proficiency in some Mission Skills
while maintaining proficiency in other Mission Skills.

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

C-20G PILOT ATTAIN AND MAINTAIN MISSION SKILL PROFICIENCY (3000 Phase)						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN POI
			BASIC POI	SERIES CONV. POI	REFRESHER POI	
OSA	OSA	AIRCRAFT PROFICIENCY	3101	3101	3101	3101
	OSA	OPERATIONAL AIRCRAFT SUPPORT	3102	3102	3102	3102

NOTE
Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

2.6 <u>REQUIREMENTS, QUALIFICATIONS, AND DESIGNATION TABLES</u>. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all 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 Aircrew Performance Records (APR) and NATOPS jackets. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events.

INDIVIDUAL DESIGNATION AND QUALIFICATION REQUIREMENTS C-20G Pilot	
Designation	**Initial Event Designation Requirements**
T2P	2101,2102,2103R,6100R
TAC	2201R,2202R,2203R,6406R,6407R,6101R
FCP	6601R,6602R
ANI/NI	5004R
TAC	6400,6401,6402
FCF	6500,6501,6008
Qualification	**Initial Event Qualification Requirements**
NATOPS	6000,6001,6002,6100
NSQ	4400,4401,4402 (UC-12W Only)
STANDARD INSTRUMENT	6003,6004,6005,6101
SPECIAL INSTRUMENT	6003,6004,6005,6102
CRM	6006,6007

2.7 <u>SYLLABUS NOTES</u>

2.7.1 All events, to include simulators, shall begin with a comprehensive brief with emphasis on administrative procedures, CRM, mission performance standards and aircrew expectations.

2.7.2 All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance utilizing all evaluation techniques available.

2.7.3 An ATF is required for any initial event completed by a Basic or Refresher pilot, or as recommended by the squadron Standardization Board. If the commanding officer has waived/deferred a syllabus sortie, the squadron training officer shall place a waiver/deferral letter in section 3 of the APR.

2.7.4 <u>Event Conditions</u>. Refer to the following table for required event conditions.

Code	Environmental Condition
D	Shall be flown or conducted during day
N	Shall be flown or conducted at night (using available night vision devices or flown unaided) at least 30 minutes after official sunset.
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided
D/NS	Shall be flown both day and night conditions, unless flown in the aircraft, in which case the event may be flown during day or night conditions
NS	Shall be flown or conducted at night using available night vision devices at least 30 minutes after official sunset
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used
N*	Event Shall be flown or conducted at night unaided
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided

.
2.7.5 Event Format Coding. The following format is used to describe aircraft, simulator, and classroom events. To provide the Commanding Officer the maximum amount of flexibility for training, some events allow for the optional use of simulators or aircraft. Those types of events will use the designator A/S for aircraft preferred, simulator optional and S/A for simulator preferred, aircraft optional.

```
1/          2/   3/    4/         5/   6/   7/   8/  /9
FAM-3000    2.0  180   B,SC,R,M   (N)  E    A    1   C-20G
```

   1/ Stage-Training Code. A unique numeric four-digit training code has
      been assigned to each syllabus event. The first digit of the event
      training code shall begin with the appropriate phase series number
      (Core Skill Introduction events = 1XXX; Core Skill events = 2XXX;
      etc.). The second digit of a T&R code refers to the stage. The third
      and fourth digits refer to the individual events within a stage, in
      sequence.

   2/ Projected Event Duration. Projected event duration should reflect the
      average time to execute the event requirement (actual time to execute
      the event may vary).

   3/ Refly Factor. Refly (proficiency interval) factors reflect the maximum
      time between syllabus events. Refly are delineated in days. An asterisk
      (*) indicates the event has no refly interval, indicating a one-time
      training requirement (unless R-coded).

   4/ Programs of Instruction

         a. B = Basic/Transition
         b. SC = Series Conversion
         c. R = Refresher
         d. IUT = Instructor Under Training Pilot

   5/ Environmental Conditions. Pilots shall fly events annotated with an N
      at least 30 minutes after official sunset.

6/ <u>Evaluation</u>. An "E" shall be annotated here if the event is required to be evaluated.

7/ <u>Device Options</u>

DEVICE OPTIONS	
Code	Requirement
A	Event performed in aircraft.
S	Event performed in simulator or a simulated practical application.
A/S	Event performed in aircraft preferred/simulator optional.
S/A	Event performed in simulator preferred/aircraft optional.

8/ <u>Device Number</u>. The number of aircraft, simulator, or other device(s) required for the completion of the event.

9/ <u>Device Type</u>. Type of device required for the completion of the event.

2.7.6 <u>Classroom (CLSRM)</u>. CLSRM lessons comprise the majority of C-20G Ground School training. All aircrew shall complete the C-20G Ground School as prescribed by the CACT instructor. Completion of CACT Ground School shall be documented in the Aircrew Performance Record (APR). Courseware shall be reviewed on an annual basis to ensure proper content, concurrency with the aircraft and operating procedures.

2.7.7 <u>Training Event Performance Requirements</u>

2.7.7.1 <u>Purpose</u>. To familiarize the PUI with general syllabus expectations, definitions, and the observation scale found on the Aircrew Training Forms (ATFs).

2.7.7.2 <u>General</u>. The 1000 phase syllabus includes all emergencies that are indicated with warnings, all emergency procedures with critical memory items, those with associated warnings, land immediately or land as soon as possible emergencies, and those that refer to any of the above. PUIs will be expected to memorize critical memory items and warnings associated with emergency procedures. They will be familiar with and be able to quickly look up other (non-memory) emergency procedures and associated notes and cautions. To reinforce the latter, during flight briefs, PUIs will open operating manuals to the appropriate page to review notes, cautions, and other non-memory items.

PUIs shall be familiar with, but will not be required to memorize numerical system limitations for those systems whose indications are displayed with a green, yellow or red scale on either the EICAS or MFDs.

All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance and procedures or systems discussed. Instructors should use all available debriefing techniques.

In the C-20G, all aspects of aircraft operation are integrated with the automated systems. As a result, training typically reserved for Instrument stages of this Manual will be integrated with the Familiarization stages throughout.

2.7.8 <u>Definitions</u>

2.7.8.1 <u>Discuss</u>

The IP shall discuss a system, procedure, or maneuver during the brief, in flight, or debrief.

The PUI shall demonstrate an understanding of all discussed items listed in the event description.

Demonstrate/Introduce flight events shall be discussed during the brief.

Emergencies listed in the event description are treated as discussion items during the brief and may be simulated during the flight at the option of the IP and in accordance with unit SOP. EPs for Simulator events will be treated as Demonstrate/Introduce items on the event in which they are listed and are subject to review during any subsequent event.

2.7.8.2 <u>Demonstrate</u>

IP performs the maneuver with accompanying description. At IP discretion, the PUI may fly the maneuver, but is not graded. Playback of recorded demonstrations may be used during simulator events.

The PUI observes the maneuver and is responsible for knowledge of the procedures during the brief.

2.7.8.3 <u>Introduce</u>

At his option, the IP may perform the maneuver with an accompanying description followed by the PUI flying the maneuver, or he may coach the PUI through the maneuver without demonstration.

The PUI shall perform the maneuver with coaching as necessary and is responsible for knowledge of the procedures prior to the flight. In general, the expectation is that the PUI will not consistently recognize errors and will frequently be outside performance standards.

2.7.8.4 <u>Review</u>

The IP observes and grades the maneuver with only minimal coaching.

The PUI is expected to perform the maneuver with minimal coaching and with only minor procedural errors. In general, the expectation is that the PUI will consistently recognize errors; however, occasionally, corrections will not be timely with some excursions outside performance standards.

2.7.8.5 <u>Evaluate</u>

The IP observes and grades the maneuver without coaching the PUI. An airborne critique of the PUI's performance is at the option of the instructor.

The PUI is expected to perform the maneuver without coaching, with minor or no procedural errors, and at a level acceptable to warrant progress in the syllabus. The expectation is that the PUI will consistently apply timely corrections with very few and quickly corrected excursions outside performance standards.

2.7.8.6 <u>Expose</u>

      The IP shall expose the PUI to the procedure or consideration during the brief, in flight or debrief.

      The PUI is not responsible for the knowledge of the procedure or consideration prior to the flight.

2.7.9 <u>Observation Scale</u>. The following table describes the numerical observations assigned for graded events. The comments that relate to each score are designed to assist instructors in assigning the correct observation based upon a student's demonstrated performance.

Observation Scale				
Observation	Level of Learning	General	Training as an Individual	Training as a Crew Member*
5	Correlation	Proactive. Ahead of the situation. Reacts correctly with changing conditions. And/or changing mission.	Performance is correct, efficient and skillful. Deviations are very minor. The student initiates corrections, if required, and they are appropriate, smooth, and rapid.	Proactive management of resources in dynamic environment. Mission effectiveness and safety enhanced by planning and coordination.
4	Application	Self/crew recognition of errors. Correct application of resources.	Self-Assess and corrects errors in time. Deviations are brief and minor. Corrections are appropriate and timely.	Active Management. Recognize and Correct Errors. Maintain crew redundancy to improve mission effectiveness and reduce risk.
3	Understanding	Minor errors not detected. Crew redundancy diminished.	Errors not detected and/or corrected in a timely manner. Corrections noticeably lag deviations.	Minor errors not detected and/or corrected. Risk unchanged.
2	Rote	Task accomplished mechanically and/or with limited situational awareness. Crew redundancy lost. Risk Increased.	Errors not recognized and/or corrected.	Errors not recognized and/or corrected.
1	Unfamiliar	Unable.	Skills not up to task.	Skills not up to task.
*The instructor must consider, based on their current performance, how well could they handle an unexpected increase in task loading, cumulative conditions, or crew factors?				

2.7.10 <u>Aircrew Evaluation Flights</u>. All pilots shall have an appropriate NATOPS evaluation form completed annually upon completion of the following:

2.7.10.1 <u>T2P NATOPS Check (NTPS-6100)</u>. A designated NI/ANI shall evaluate NTPS-6100.

2.7.10.2 <u>TAC NATOPS Check (NTPS-6101)</u>. A designated NI/ANI shall evaluate NTPS-6101.

2.7.10.3 <u>Standard Instrument Check (INST-6200)</u>. A member of the Instrument Flight Board (IFB) shall evaluate INST-6200.

2.7.10.4 <u>Special Instrument Check (INST-6201)</u>. A member of the IFB who possesses a current Special Instrument Rating shall evaluate INST-6201.

2.7.11 <u>Instructor Requirements</u>

For all simulator and flight events the instructor requirement is noted at the bottom of the event. If the event does not contain an instructor requirement, then the minimum requirement is a TAC proficient in the given event.

For Core Skill Introduction simulator events, designated contract instructors (CIs) may fulfill the role of instructor IAW NAVMC 3500.14C para. 401.

2.7.12 <u>Crew Requirements/Position Designations</u>. Crew requirements are listed for each stage of training. A designated T2P or TAC may serve as the Crew Chief (CC) on local area training flights.

2.7.13 <u>Event Completion</u>. Event completion is predicated upon demonstrated proficiency. When supervising individual events, unit instructors/leaders shall ensure that trainees demonstrate proficiency per T&R standards prior to logging successful event completion. Evaluating individual proficiency in an event normally requires both objective and subjective assessment. If, in the instructor's opinion, the PUI does not adequately perform a required event, then all or parts of the sortie shall be repeated until adequate performance is demonstrated. If an individual fails to accomplish the requirements of an event per the performance standards, the individual shall not log that event and the proficiency status for that event remains unchanged. Times indicated for each event are for planning purposes only.

2.7.14 <u>Multiple Event Logging</u>. There may be opportunities for crewmembers to accomplish the requirements of more than one event during a scheduled training evolution. Units are encouraged to take advantage of complex training opportunities that allow multiple event completion. Under all circumstances, post-event logging (single or multiple) is allowable if the requirements for each event are accomplished per the performance standard.

2.7.15 <u>CRM</u>. Aircrew shall brief techniques of CRM for all flights and/or events.

2.7.16 <u>ORM</u>. Aircrew shall brief those factors that affect risk mitigation decisions for every flight or mission.

2.8 <u>CORE SKILL INTRODUCTION PHASE (1000)</u>

2.8.1 <u>General</u>. The approved CACT Initial is considered synonymous with a C-20G Fleet Replacement Squadron. The USMC C-20G CACT contract is part of a larger CACT contract managed by the C-20G Model Manager (currently CFLSW). Core Skill Introduction FRS Academics are conducted at CACT during the approved C-20G initial training syllabus generated by CACT. The Commanding Officer has the responsibility to define the required content, conduct

reviews, forward required changes and approve the content for all Core Skill Academic events.

2.8.2 Stages

UC-20G CORE INTRODUCTION STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
ACAD	2.8.3	2-11
CACT SIMS	2.8.4	2-12

2.8.3 Academic Ground School (ACAD) (1000 PHASE)

2.8.3.1 Purpose. To prepare the student for the simulator portion of the Core Skill Introduction phase. Courseware is developed by the CACT and covers, but is not limited to: Flight Training Systems; Avionics and Electrical Systems; Power Plant and Related Systems; Hydraulic and Pneumatic Systems; Communications and Navigation Systems; Flight Management Systems (FMS); Traffic Collision Alerting System (TCAS); Enhanced Ground Proximity Warning System (EGPWS); Egress and Ditching Procedures; Crew Tactics and Safety.

2.8.3.2 General. Due to constantly changing avionics in the C-20G, Basic, Series Conversion, and Refresher POIs are required to complete the full ACAD and CACT syllabus below.

ACAD-1000   80.0   *   B,SC,R   CACT Ground School

Goal. Upon completion, the student will be able to perform as a PUI in the CACT Simulator Phase.

Requirement. Per CACT approved syllabus.

Performance Standard. Per CACT approved syllabus.

Prerequisites. 500 total fixed wing flight hours.

2.8.4 CACT

2.8.4.1 Purpose. To provide the PUI with the necessary training to obtain a type rating in the C-20G IAW industry standards and prepare the PUI for training as a T2P capable of meeting mission-specific requirements of the aircraft.

2.8.4.2 General. All stage events marked CACT (except for CACT 1008-1010) shall be accomplished at the approved CACT simulator site. Every attempt should be made to ensure Navy checklists and procedures are studied and adhered to during the CACT while operating as both the Pilot Flying (PF) and the Pilot Monitoring (PM).

        CACT-1001 through CACT-1007 are flown as part of the CACT Initial training and may be subject to change when the CACT contract changes. Any changes to the CACT contract are considered acceptable by this T&R manual. Should the number of sorties differ in a new CACT contract, TECOM will be notified and the appropriate local pen-and-ink changes will be made.

        CACT-1001 through CACT-1007 shall be instructed by a qualified CACT approved instructor and are part of CACT Initial Training. CACT 1008-1010 may be accomplished in the C-20G aircraft as operations dictate.

2.8.4.3 <u>Crew Requirements</u>. CACT-1001 through CACT-1007 may be accomplished with just the PUI and CACT instructor. However, every attempt should be made to pair up with another Navy/Marine Corps PUI in order to facilitate training using established Navy C-20G checklists and procedures. There is no requirement for a CC on CACT-1001 through CACT-1007. For any event requiring a CC, a qualified pilot may perform the CC duties.

CACT-1001-1007   28.0   *   B,SC,R   (N*)   S   1 C-20G

<u>Goal</u>. Perform normal procedures and selected abnormal/emergency procedures during a local training flight as per the current CACT contract.

<u>Requirement</u>. Emphasize the following objectives: Preflight Procedures, Takeoff and Departure Phase, In-flight Maneuvers, Instrument Procedures, Landings and Approaches, and Post-flight Procedures. Attention should be given to Communication, Advanced/Automated Cockpits, Situational Awareness, and FMS Management.

<u>Performance Standard</u>. Perform all normal, abnormal, and emergency checklists and procedures, repeating as necessary to achieve 100% completion. In addition, demonstrate effective use of CRM skills.

<u>Prerequisite</u>. ACAD-1000

CACT-1008   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

<u>Goal</u>. Introduce USMC specific C-20G procedures with emphasis on local SOP. Review selected systems and normal/abnormal procedures.

<u>Requirement</u>. Discuss selected systems per the ATF. Introduce selected precision and non-precision approaches utilizing system automation and both normal and abnormal procedures.

<u>Performance Standard</u>. Demonstrate sufficient systems and procedural knowledge to progress to the next event.

<u>Prerequisite</u>. CACT-1007

<u>Crew Requirements</u>. PUI, NI/ANI and CC

CACT-1009   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

<u>Goal</u>. Introduce night operations.

<u>Requirement</u>. Discuss aircraft lighting and peculiarities associated with night aircraft operations. Discuss selected systems as per the ATF. Perform multiple approaches and landings utilizing normal procedures in the night environment.

<u>Performance Standard</u>. Demonstrate sufficient knowledge of aircraft systems and the ability to competently handle the aircraft in all phases of flight in a night environment.

<u>Prerequisite</u>. CACT-1008

<u>Crew Requirements</u>. PUI, NI/ANI, and CC

CACT-1010   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

Goal. Successfully conduct a review simulator flight to prepare PUI
for a NATOPS evaluation flight in the aircraft.

Requirement. Perform a "simulated" NATOPS evaluation flight while reviewing
all OPNAVINST 3710 and applicable local directives which will be required on
initial NATOPS check in the aircraft.

Performance Standard. Be able to safely operate the aircraft IAW the C-20G
NATOPS and unit SOPs under normal and emergency situations to the level of a
T2P. As a T2P, mastery of BOLD-face emergency procedures and aircraft
operating limitations is a requirement for a passing grade.

Prerequisite. CACT-1009

Crew Requirements. PUI, NI/ANI, and CC

2.9 CORE SKILL PHASE (2000)

2.9.1 General

2.9.1.1 Purpose. To practice the enabling Core Skills required for the PUI
to attain core competency in the aircraft and be prepared to learn the
mission skills associated with his/her crew position.

2.9.1.2 Stages. The following stages are included in the Core Skill Phase of
training.

UC-20G CORE STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
Transport Second Pilot (T2P)	2.9.2	2-14
Transport Aircraft Commander (TAC)	2.9.3	2-15

Refer to paragraph 216 for the ACPM lectures required for this phase of
training.

2.9.2 T2P

2.9.2.1 Purpose. Prepare and designate the PUI as a T2P.

2.9.2.2 General. During the T2P designation phase, a minimum of two (2)
hours of night operations and three (3) hours of actual/simulated instrument
time shall be logged.

T2P-2101   4.0   365   B,M   D   A   1 C-20G

Goal. Introduce differences between the simulator and the actual aircraft
with emphasis on the landing pattern. Introduce left seat operations.

Requirement. Emphasis shall be placed on tiller operations while taxiing and
on the runway. Additional emphasis shall be placed on procedural differences
during take-off and landing from the left vice right seat (hand positions,
voice callouts, and emergency procedures). Two hours of actual or simulated
instrument time must be logged during this event.

Performance Standard. Comply with C-20G NFM Emergency Procedures.

Prerequisite. CACT-1010, and all pre-flight requirements as established by local SOP

Crew Requirements. PUI, NI/ANI, and CC

T2P-2102   2.0   *   B   N*   A   1 C-20G

Goal. Introduce night operations.

Requirement. Practice night ground and air operations. Multiple landings and approaches shall be accomplished utilizing normal procedures.

Performance Standard. Comply with C-20G NFM and unit SOP for night operations.

Prerequisite. T2P-2101

Crew Requirements. PUI, NI/ANI, and CC

T2P-2103   2.5   *   B,SC,R   (N*)   E   A   1 C-20G

Goal. Prepare PUI for an initial NATOPS flight.

Requirement. Conduct an objective evaluation of the PUI's knowledge of flight planning, filing, briefing, and conduct of flight under normal operating conditions, emergency procedures, closing out flight plans, and debriefing to ensure PUI is prepared to successfully complete an initial NATOPS check.

Performance Standard. Executes flight and ground operations safely IAW OPNAV 3710.7 Series, C-20G NFM, NATOPS Instrument Flight Manual, and local SOPs.

Prerequisite. T2P-2102

Crew Requirements. PUI, NI/ANI, and CC

2.9.3 TAC

2.9.3.1 Purpose. To introduce the PUI to the roles and responsibilities of a C-20G Transport Aircraft Commander.

2.9.3.2 General. Perform PF and PM duties while gaining proficiency to become an Aircraft Commander.   To be nominated for TAC by the Stan Board, the prospective TAC must have a minimum of 1000 total flight hours, 650 FW hours, and 100 hours in the C-20G.

TAC-2201   4.0   365   B,SC,R,M   (N*)   S/A   1 C-20G

Goal. Introduce TAC.

Requirement. Introduction to TAC operations. Emphasis shall be placed upon briefing, preflight, cockpit leadership during flight, post flight, and debrief.

Performance Standard. Safely operate the aircraft in all flight regimes while displaying sound judgment, systems knowledge, and flight deck leadership.

Prerequisite. IOE-6405, NTPS-6100, 1000 total hours, 650 FW hours, 100 C-20G hours.

Crew Requirements. PUI, NI/ANI, and CC

TAC-2202   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

Goal. Practice TAC responsibilities.

Requirement. Practice TAC duties with emphasis on aircraft performance, night operations, and IMC operations.

Performance Standard. Safely operate the aircraft in all flight regimes while displaying sound judgment, systems knowledge, and flight deck leadership.

Prerequisite. TAC-2201

Crew Requirements. PUI, NI/ANI, and CC

TAC-2203   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

Goal. Conduct Line Oriented Flight Training (LOFT).

Requirement. The purpose of the LOFT is to simulate an actual flight from planning to debrief. The PUI will be required to produce mission planning products at brief time as listed on the ATF.

Performance Standard. Properly plan and execute a line mission to the level expected of a TAC with special emphasis being placed upon the PUI's decision-making ability.

Prerequisite. TAC-2202

Crew Requirements. PUI, NI/ANI, and CC

2.10 MISSION SKILL PHASE (3000)

2.10.1 General. This phase of training is designed to enable pilots to obtain proficiency in Mission Skills. Mission Skills are designed to fulfill the requirements of the C-20G Mission Essential Task List as defined by the associated Marine Corps Task (MCT).

2.10.2 Stages. The following stage is included in the Mission Skill Phase of training.

UC-20G MISSION STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
Operational Airlift Support (OSA)	2.10.3	2-16

Enclosure (1)

2.10.3 OSA

2.10.3.1 Purpose. This stage of training is designed to fulfill the
requirements set forth in MCT 1.3.3.3.1, Conduct Aviation Support Operations.

OSA-3101   4.0   180   B,SC,R,M   (N*)   A/S   1 C-20G

Goal. Aircraft proficiency. Retain and maintain proficiency with all
aspects of aircraft operation. Because of the design and operation of the C-
20G, a standard flight will usually consist of some visual and instrument
flight operations resulting in proficiency in all aspects of operating the
aircraft.

Requirement. Discuss selected systems. Demonstrate competence in all areas
of C-20G operation. At least 1.0 Hour of Actual or Simulated Instrument Time
and one instrument approach should be logged during this event.

Performance Standard. Aircrew must demonstrate knowledge of aircraft systems
and ability to competently handle the aircraft in all phases of flight as the
PF or PNF.

Prerequisite. NTPS-6100

Crew Requirement. TAC, CP, CC

OSA-3102   4.0   180   B,SC,R,M   (N*)   A/S   1 C-20G

Goal. Conduct a line mission under actual or simulated tasking from Higher
Headquarters.

Requirement. Conduct a line mission.

Performance Standard. Conduct a line mission involving (but not limited to)
overwater flight, international airspace, or takeoffs and landings away from
home station and outside of the local flying area. A line mission should
involve some level of Distinguished Visitor (DV), general passenger, or
cargo-carrying operations. If CACT is being used to update proficiency, the
mission planning phase must include the same level of preparation and
products as an event flown in the actual aircraft.

Prerequisite. NTPS-6100

Crew Requirement. TAC, CP, CC, LM

2.11 CORE PLUS SKILL PHASE (4000). This phase is not applicable to C-20G.

2.12 INSTRUCTOR TRAINING PHASE (5000)

2.12.1 General. The purpose of this Phase is to train qualified pilots to
conduct various levels of instruction. There are two levels of instructors
within the scope of this manual. They are:

2.12.1.1 NATOPS Instructor (NI). An IP who may instruct all training phases
and administer NATOPS evaluation flights to include conducting the Assistant
NATOPS Instructor Check Flight.

     The following general requirements shall be adhered to:

        1000 hours of total FW pilot time
        150 hours of C-20G TAC time

2.12.1.2 Assistant NATOPS Instructor (ANI). An IP who may instruct all
training phases and administer NATOPS evaluation flights.

        The following general requirements shall be adhered to:

        1000 hours of total FW pilot time
        100 hours of C-20G TAC time.

        All events except IUT-5004 should be accomplished in the CACT approved
simulator but may utilize the aircraft as appropriate. To attain the
designation of unit NI, the prospective NI must execute the IUT-5004 with the
C-20G Model Manager NATOPS Evaluation Pilot (NEP). To attain the designation
of ANI, the IUT-5004 may be executed with either the unit NI or
aforementioned NEP.

2.12.2 Academics. To complete all academic requirements to prepare IUT for
flight portion of training.

ACAD-5000   5.0   *   B,SC,R   G

Goal. Instructor Pilot academic training.

Requirement. Complete the academic ground school for IUT.

Performance Standard. The IUT shall demonstrate knowledge of instructional
procedures and techniques.

Prerequisites. NTPS-6101, FCF-6602, 1000 total FW hours, 100 hours as C-20G
TAC, Standardization Board recommendation, and CRMF/CRMI.

2.12.3 IUT

2.12.3.1 Purpose. To develop qualified Instructor Pilots (IPs) using a
standardized instructor training program. This syllabus is designed to
prepare aircraft commanders to instruct specific events.

2.12.3.2 General. A prospective IP shall be a TAC, FCP, and CRMF/CRMI that
the Standardization Board and Commanding Officer determine has the requisite
airmanship and maturity to begin IP training.

2.12.3.3 Academic/Ground Training. Complete the IUT ground school syllabus
and be a designated CRM Facilitator. The IUT shall review all directives
pertinent to the safe conduct of flight to include the OPNAV 3710.7_,
Instrument Flight Manual, FAR/AIM, AFM, and local SOPs. The IUT shall be
familiar with the T&R Program Manual (NAVMC 3500.14_) and this T&R.

IUT-5001   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

Goal. IP Introduction. The goal of this event is to practice emergency
procedures, aircraft handling exercises, and discuss unit SOP adherence in
order to assess the IUT's ability to perform as an IP.

Requirement. The IP shall discuss instructional techniques, aircraft and PUI
monitoring, defensive posture, and common PUI errors. The IUT shall
demonstrate the ability to maintain a safe training environment while
noticing and correcting common copilot errors as simulated by the IP.

Performance Standard. The IUT must possess a solid understanding of NATOPS
and applicable SOPs while demonstrating a high level of situational awareness
while operating the aircraft.

Crew Requirements. NI/ANI, IUT

Prerequisites. ACAD-5000

IUT-5002   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

Goal. Introduce instructional techniques. The IP will demonstrate to the
IUT how to construct an instructional event in reference to required
maneuvers and evaluation standards. Additionally, the IP will demonstrate to
the IUT how to conduct an instructional sortie from brief to debrief.

Requirement. The IUT will monitor an instructional sortie between an IP and
a PUI while occupying the jump seat and performing crew chief duties. The IP
will emphasize instructional techniques and SOP adherence. Syllabus used
will be IAW the event appropriate to the PUI.

Performance Standards. The IUT must possess a solid understanding of NATOPS
and applicable SOPs while demonstrating a high level of situational awareness
while operating the aircraft.

Crew Requirements. NI/ANI, IUT, PUI (any phase)

Prerequisite. IUT-5001

IUT-5003   4.0   *   B,SC,R   (N*)   S/A   1 C-20G

Goal. Introduce phase-appropriate instructional techniques during the
conduct of an actual instructional sortie.

Requirement. The IUT will act as instructor for a pilot who is either an
actual PUI or acting PUI. The IP shall occupy the jump seat and perform crew
chief duties. The IUT shall conduct the mission brief and execute the
syllabus event IAW the event description.

Performance Standard. Demonstrate the ability to competently execute a
training event from brief to debrief.

Crew Requirements. NI/ANI, IUT, PUI (any phase)

Prerequisite. IUT-5002

IUT-5004   3.0   *   B,SC,R   (N*) E A/S   1 C-20G

Goal. Evaluate an IUT administering a NATOPS check.

Requirement. The IUT will act as the instructor for a pilot who is either an
actual PUI or acting PUI. The IP shall occupy the jump-seat. The IUT shall

conduct the mission brief and execute the syllabus event IAW the event description.

Performance Standard. Demonstrate competencies while conducting a safe and efficient instructional event.

Crew Requirements. NI/ANI, IUT, PUI (phase appropriate)

Prerequisite. IUT-5003

2.13 REQUIREMENTS and QUALIFICATIONS PHASE (6000)

2.13.1 General. To provide a vehicle for tracking codes associated with certifications and qualifications. E-coded sorties are evaluation sorties. Once the flight to attain the qualification or designation is complete, a letter from the Squadron Commanding Officer awarding the qualification or designation shall be placed in the individual's NATOPS jacket.

2.13.2 Stages

UC-20G QUALIFICATIONS, DESIGNATIONS, AND REQUIREMENTS STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
Academics (ACAD)	2.13.3	2-20
NATOPS (NTPS)	2.13.4	2-22
Instruments (INST)	2.13.5	2-23
Emergency Procedures (EP)	2.13.6	2-23
T2P Initial Operating Experience (IOE)	2.13.7	2-24
TAC Initial Operating Experience (IOE)	2.13.8	2-26
Functional Check Pilot (FCP)	2.13.10	2-28
Recurrent Training (RECR)	2.13.11	2-29

2.13.3 ACAD. Provide yearly NATOPS academic requirements to maintain currency in the aircraft.

ACAD-6000   4.0   365   B,SC,R,M   E

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

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

ACAD-6001   2.0   365   B,SC,R,M   E

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

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.

ACAD-6002   2.0   365   B,SC,R,M   E

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

Performance Standard. Achieve a minimum grade of qualified on the oral examination.
Prerequisite. ACAD-6000 and ACAD-6001 within 60 days preceding this event

ACAD-6003   8.0   365   B,SC,R,M   E

Goal. The Instrument Ground School (IGS) shall be an approved Commander Naval Air Forces (CNAF) approved syllabus and at a minimum cover the following topics:

     1) Spatial disorientation.
     2) CNO GPS Policy Statement and GPS fundamentals to include RNAV (GPS)
     and Required Navigation Performance (RNP).
     3) Reduced Vertical Separation Minimums (RVSM) procedures.
     4) Requirements and denial reports.
     5) Use of non-DoD instrument approach/departure
     procedures.
     6) Use of non-DoD GPS NOTAMS systems (Jeppesen-GPS NOTAMS and
     Databases).
Performance Standard.   Achieve a minimum grade of qualified for IGS which also encompasses the open book examination.

ACAD-6004   2.0   365   B,SC,R,M   E

Goal. The oral NATOPS instrument examination shall consist of, but not be limited to the Model Manager question bank in addition to any subject listed for coverage in OPNAVINST 3710.7 series. The examination shall include questions on the following topics:

     Pertinent Navy or Marine Corps regulations, orders, and instructions.

     Pertinent parts of the FAR/AIM other regulations, and/or aeronautical publications which are applicable.

     Interpretation of weather information normally used in flight planning. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the airman's knowledge of the NATOPS, NATOPS Instrument Flight Manual, FAR/AIM and/or aeronautical publications which are applicable, normal/emergency instrument ground and flight procedures, weather, aircraft limitations, and performance.

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

Prerequisite. ACAD-6003

ACAD-6005 2.0   365   B,SC,R,M   E

Goal. CRM ground instruction IAW applicable directives and instructions.

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

ACAD-6006 2.0   *   B,SC,R   E

Goal. Functional Check Flight Exam

Performance Standard. Demonstrate satisfactory knowledge of FCF procedures.
2.13.4 NTPS

2.13.4.1 Purpose. Provide required annual NATOPS and CRM flights to maintain
currency.

NTPS-6100   2.5   365   B,SC,R,M   (N*) E   S/A   1 C-20G

Goal. Complete Annual T2P NATOPS evaluation.

Requirement. Perform annual T2P NATOPS evaluation per C-20G NFM, OPNAVINST
3710, and all applicable local directives.

Performance Standard. Be able to safely operate the aircraft IAW the C-20G
NATOPS and unit SOPs under normal and emergency situations to the level of
positional designation within the aircraft.

Prerequisite. ACAD-6000, ACAD-6001, ACAD-6002 within 60 days preceding this
event

Crew Requirements. PUI, NI/ANI, and CC

NTPS-6101   2.5   365   B,SC,R,M   (N*) E   S/A   1 C20-G

Goal. Complete Annual TAC NATOPS evaluation. Upon completion of
initial NTPS-6101, Pilot is eligible to be designated a TAC by the CO.

Requirement. Perform annual TAC NATOPS evaluation per C-20G NFM, OPNAVINST
3710, and all applicable local directives.

Performance Standard. Be able to safely operate the aircraft IAW the C-20G
NATOPS and unit SOPs under normal and emergency situations to the level of
positional designation within the aircraft.

Prerequisite. TAC IOE-6406, ACAD-6000, ACAD-6001, ACAD-6002 within 60 days
preceding this event. Minimum of 700 FW Hours.

Crew Requirements. PUI, NI/ANI, and CC

NTPS-6102   2.5   365   B,SC,R,M   (N*) E   S/A   1 C-20G

Goal. Complete Annual CRM flight evaluation.

Requirement. Perform initial/annual CRM flight evaluation per applicable
directives. May be flown in conjunction with annual NATOPS evaluation
flight.

Performance Standard. Performance standards will be according to the C-20G
NFM.

Prerequisite. ACAD-6005

Crew Requirements. PUI, NI/ANI, and CC

2.13.5 INST

2.13.5.1 Purpose. To qualify pilot annually with either a Standard or
Special Instrument Rating.

INST-6200   2.0   365   B,SC,R,M   (N*)   E   S/A   1   C-20G

Goal. Successfully complete standard instrument flight evaluation and
maintain required annual instrument rating.

Requirement. Following completion of the ground evaluation events, a
standard instrument flight/simulator evaluation event shall be flown and
completed with a grade of "Qualified." Conduct an objective evaluation of
the airman's knowledge of flight planning, filing, briefing, conduct of
flight under normal operating conditions, emergency procedures, closing out
flight plans, and debriefing.

Performance Standard. Executes flight and ground operations safely IAW OPNAV
3710.7 Series, C-20G NFM, and NATOPS Instrument Flight Manual. All areas on
the instrument flight evaluation are critical. An "Unsatisfactory" grade in
any area shall result in an "Unsatisfactory" grade for the flight.

Prerequisite. ACAD-6003 (within 60 days), ACAD-6004, and minimum experience
per OPNAVINST 3710.7_

Crew Requirements. PUI, TAC/IFB, and CC

INST-6201   2.0   365   B,SC,R,M   (N*)   E   S   1   C-20G

Goal. Successfully complete special instrument flight evaluation and maintain
required annual instrument rating.

Requirement. Following completion of the ground evaluation events, a special
instrument simulator evaluation event shall be flown and completed with a
grade of "Qualified." Conduct an objective evaluation of the airman's
knowledge of flight planning, filing, briefing, conduct of flight under
normal operating conditions, emergency procedures, closing out flight plans,
and debriefing.

Performance Standard. Executes flight and ground operations safely IAW OPNAV
3710.7 Series, C-20G NFM, and NATOPS Instrument Flight Manual. All areas on
the instrument flight evaluation are critical. An "Unsatisfactory" grade in
any area shall result in an "Unsatisfactory" grade for the flight.

Prerequisite. ACAD-6003 (within 60 days), ACAD-6004, NTPS-6101, and possess minimum experience per OPNAVINST 3710.7_

Crew Requirements. PUI, TAC with current Special Instrument Rating/IFB, and CC

2.13.6 EP

2.13.6.1 Purpose. Maintain monthly and quarterly emergency procedure training.

2.13.6.2 General. Emergency procedure training consists of a monthly EP exam and a quarterly EP simulator IAW NAVMC 3500.14C para. 201.2. In the event the simulator is unavailable, the EP review may be conducted in the cockpit either pre or post flight as a static event with an NI/ANI. EP-6301 shall also be logged in conjunction with NTPS-6101 and NTPS-6102 events.

2.13.6.3 Crew Requirements. Emergency Procedure review events in the simulator shall be instructed by a qualified CI, shall be accomplished with two pilots, and should include a crew chief to the maximum extent possible.

EP-6300   1.0   30   B,SC,R,M   E   G

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam per NAVMC 3500.14C.

EP-6301   1.0   90   B,SC,R,M   (N*)   E   S/A   1   C-20G

Goal. Emergency Procedure Review.

Requirement. This event will review C-20G emergency procedures and fulfills the requirement of quarterly EP simulator training per NAVMC 3500.14.

Performance Standard. Comply with C-20G NFM Emergency Procedures.

2.13.7 T2P Initial Operating Experience (IOE)

2.13.7.1 Purpose. Introduce and practice responsibilities and procedures required during line missions while serving as a T2P. The focus of training should be on increasing the level of responsibility on the PUI in order to perform as a mission proficient T2P.

2.13.7.2 General. Events shall be flown in conjunction with scheduled military logistics missions or Out of Area Training (OAT) flights that include at least one required stop at an airfield other than the PUI's home field in addition to the requirements described in each event. The PUI should be thoroughly introduced to and practice all expected pre-mission planning products, mission planning software, SOP adherence, and RON procedures. When flown as an OAT, the training should still emulate the same level of mission preparedness and execution as an actual line mission.

IOE-6401   5.0   *   B,SC,R   (N*)   A   1   C-20G

Goal. Practice T2P roles and responsibilities during all phases of a military logistics mission to a domestic destination.

Requirement. Perform duties of a T2P as both PF and PM in conjunction with a non-international over-water military logistics mission. The T2P will be responsible for performing the majority of the pre-mission planning while seeking the guidance of the TAC when needed.

Performance Standard. Competently plan and execute the duties of a T2P while practicing good CRM.

Prerequisite. NTPS-6100, 25 hours in C-20G

Crew Requirements. PUI, TAC, and CC

IOE-6402   5.0   *   B,SC,R   (N*)   A   1   C-20G

Goal. Introduce long-range, non-radar, ICAO environment procedures while practicing T2P roles and responsibilities during all phases of a military logistics mission to an international destination.

Requirement. Perform duties of a T2P as both PF and PM in conjunction with an international over-water military logistics mission. Introduce long range navigation flight planning, Military and Commercial flight weather packets, OPARS, Jeppesen mission planning, diplomatic clearances and appropriate publications. Practice use of FLIP enroute flight publications, coast out procedures, fuel management procedures, non-radar reporting requirements, and HF/SELCAL voice procedures. Discuss peculiarities of international over-water flight operations. Demonstrate and perform proper communications procedures with different controlling agencies.

Performance Standard. Perform all duties of a T2P while demonstrating basic familiarity with LRN procedures.

Prerequisite. NTPS-6100, 25 hours in C-20G

Crew Requirements. PUI, TAC, and CC

IOE-6403   5.0   *   B,SC,R   (N*)   A   1   C-20G

Goal. Introduce Special Qualification Airfields (SQA).

Requirement. Conduct requisite mission planning, analysis and execution for a mission to a SQA. Utilize all available planning tools to include SQA videos and NGA SQA assessments to aide your planning. Conduct at least 1 approach and full-stop landing to the SQA.

Performance Standard. Perform all duties of a T2P while planning and executing a mission involving a SQA.

Prerequisite. IOE-6401, IOE-6402

Crew Requirements. PUI, TAC, and CC

IOE-6404   5.0   *   B,SC,R   (N*)   A   1   C-20G

Goal. Introduce High Elevation Airfield Operations.

Requirement. Conduct requisite mission planning, analysis and execution for a mission to an airfield with a field elevation at or above 3000ft. Utilize

all available planning tools to thoroughly compute and discuss Take-off and Landing Distance (TOLD) factors, variables influencing performance, and contingencies inherent to high density altitude environment. Discuss circling approach, and should execute minimum of 1 circling approach if able. Conduct at least 1 approach, full-stop landing, and take-off.

Performance Standard. Perform all duties of a T2P while planning and executing a mission involving a High Altitude Airfield.

Prerequisite. IOE-6401, IOE-6402

Crew Requirements. PUI, TAC, and CC
IOE-6405   5.0   *   B,SC,R   (N*) E   A   1   C-20G

Goal. Demonstrate mastery of T2P roles and responsibilities during all phases of a military logistics flight while reviewing long-range, non-radar, ICAO environment procedures.

Requirement. Perform duties of a T2P as both PF and PM in conjunction with an international over-water military logistics mission across international FIR boundaries and into and out of an international airfield. Practice long range navigation flight planning. Practice use of FLIP enroute flight publications, coast out procedures, fuel management procedures, non-radar HF/SELCAL voice procedures.

Performance Standard. Perform all duties of a T2P while demonstrating competencies established in T2P-IOE 6402

Prerequisite. IOE-6403, IOE-6404, 75 hours in C-20G

Crew Requirements. PUI, TAC, and CC

2.13.8 TAC IOE

2.13.8.1 Purpose. Introduce and practice responsibilities and procedures required during line missions while serving as a TAC.

2.13.8.1 General

     Events shall be flown in conjunction with scheduled military logistics missions or OAT flights that include at least one required stop at an airfield other than the PUI's home field in addition to the requirements described in each event. The PUI should be thoroughly introduced to and practice all expected pre mission planning products, mission planning software, SOP adherence, and RON procedures. When flown as an OAT, the training shall still emulate the same level of mission preparedness and execution as an actual line mission.

     The TAC IOE is comprised of three events aimed at ensuring the PUI is fully capable of serving in the capacity of a C-20G TAC in both the local and ICAO operating environments.

     The completion of the TAC IOE phase will make the prospective TAC eligible to conduct their TAC NTPS-6101 evaluation. Upon completion of NTPS-6101, the PUI is qualified for worldwide operations as an Aircraft Commander and designation as a TAC.

During the TAC IOE phase, the IP shall sign for the aircraft and be fully responsible for the entire evolution in the capacity of both IP and Aircraft Commander.

IOE-6406   5.0   *   B,SC,R   (N*)   A   1   C-20G

Goal. Practice roles and responsibilities of a TAC during all phases of a military logistics mission to an international destination.

Requirement. Perform duties of a TAC as both PF and PM in conjunction with an international over-water military logistics mission across international FIR boundaries and into and out of an international airfield. Discuss peculiarities of international over-water flight operations. Demonstrate and perform proper communications procedures with different controlling agencies.

Performance Standard. Perform all duties of a TAC while practicing CRM.

Prerequisite. TAC 2203, 100 hours in C-20G

Crew Requirements. PUI, NI/ANI, and CC

IOE-6407   5.0   *   B,SC,R   (N*) E   A   1   C-20G

Goal. Demonstrate mastery of TAC capabilities as PF during international training or line mission.

Requirement. Perform duties of a TAC as PM duties in conjunction with an international over-water military logistics mission across international FIR boundaries and into and out of an international airfield. Discuss peculiarities of international over-water flight operations. Demonstrate and perform proper communications procedures with different controlling agencies. The PUI will be responsible for performing all of the pre-mission planning, ADB review, preflight inspection, and flight execution while seeking the guidance of the NI/ANI when needed.

Performance Standard. Competently plan and execute the duties of a TAC while practicing good CRM on international flight.

Prerequisite. IOE - 6406

Crew Requirements. PUI, NI/ANI, and CC

IOE-6408   5.0   *   B,SC,R   (N*) E   A   1   C-20G

Goal. Demonstrate mastery of TAC capabilities as PM during an International training or line mission.

Requirement. Perform duties of a TAC as PM duties in conjunction with an international over-water military logistics mission across international FIR boundaries and into and out of an international airfield. Discuss peculiarities of international over-water flight operations. Demonstrate and perform proper communications procedures with different controlling agencies. The PUI will be responsible for performing all of the pre-mission planning, ADB review, preflight inspection, and flight execution while seeking the guidance of the NI/ANI when needed.

Performance Standard. Competently plan and execute the duties of a TAC while practicing good CRM.

Prerequisite. IOE - 6407

Crew Requirements. PUI, NI/ANI, and CC

2.13.9 DESG

2.13.9.1 Purpose. To obtain the designation of T2P or TAC.

2.13.9.2 General. The following guidelines apply to the different designations:
        Once the PUI is T2P-2103 complete and has successfully passed an initial T2P NATOPS check (NTPS-6100) in the aircraft, the designation of T2P is authorized and upon designation by the CO, the T2P may operate the aircraft from either seat at any time.

        Aircrew will possess a minimum of 1000 hours total flight time, 700 FW hours, and 125 hours in the C-20G to be designated a TAC.

        Emphasis on the TAC phase is flight leadership and aeronautical competence. The PUI must be able to manage the cockpit in all phases of flight and utilize sound judgment with regard to mission decisions. A sound knowledge of all aircraft systems, local SOP, and USMC OSA procedures is a requirement and shall be thoroughly vetted throughout this POI.

         A TAC will often be performing PM duties from the right seat but still assumes full responsibility as the Aircraft Commander. In order to mitigate the risk associated with both left and right seat TAC operations, a TACUI should operate the aircraft as the PF from the right seat and as the PM from the left seat during the simulator sessions in order to build proficiency from both seat positions.

        Due to frequency of remote location operations, all TACs must be qualified as FCPs. Conducting FCF-6601 in the same simulator period as the TAC 2000 series events will ensure a standardized training program for all future FCPs.

        Once the PUI is IOE-6408 complete, the TACUI is eligible to take a TAC NATOPS check (NTPS-6101). Upon successful completion of the 6101, the designation of TAC is authorized.

2.13.10 FCP

2.13.10.1 Purpose. Prepare and designate the Pilot as an FCP

2.13.10.2 General. Aircrew will be a designated TAC and receive a Standardization Board recommendation in order to be designated an FCP. Once the PUI is designated, the FCP may conduct FCF operations as pilot in command.

FCF-6601   4.0   *   B,SC,R   D   E   S   1   C-20G

Goal. Familiarize the PUI with the FCF checklist and procedures. Conduct training for designation as an FCP.

Requirement. Conduct FCP training with an IP. Brief: flight procedures/conduct, FCF requirements, FCF procedures. Conduct: QA/Maintenance brief, ADB review, exterior/interior inspection, engine start,

taxi, takeoff, climb, level at altitude, FCF checks, enroute descent, penetration, landing, post-flight, debrief QA/Maintenance, sign off FCF card and required maintenance paperwork.

Performance Standard. Satisfactorily execute procedures per the NAVAIR 01-C20GAAA-1F, OPNAVINST 3710.7_, and OPNAVINST 4790.2_.

Prerequisite. TAC-2203

Crew Requirements. PUI, NI/ANI, and CC

FCF-6602   4.0   *   B,SC,R   D   E   A   1   C-20G

Goal. Familiarize the PUI with the FCF checklist and procedures. Capitalize on techniques and procedures learned in the simulator during FCF-6601 and demonstrate knowledge of execution in the aircraft. At the completion of this event and with all other prerequisites are met the PUI will be designated an FCP.

Requirement. Conduct FCP training with an IP. Brief: flight procedures/conduct, FCF requirements, FCF procedures. Conduct: QA/Maintenance brief, ADB review, exterior/interior inspection, engine start, taxi, takeoff, climb, level at altitude, FCF checks, enroute descent, penetration, landing, post-flight, debrief QA/Maintenance, sign off FCF card and required maintenance paperwork.

Performance Standard. Satisfactorily execute procedures per the NAVAIR 01-C20GAAA-1F, OPNAVINST 3710.7_, and OPNAVINST 4790.2_.

Prerequisite. NTPS-6101, FCF-6601

Crew Requirements. PUI, NI/ANI, and CC

FCF-6603   4.0   180   B,SC,R,M   D   E   S/A   1   C-20G

Goal. Refresh the qualified FCP on FCF procedures and regain currency.

Requirement. Execution of an FCF in the Simulator or Aircraft to regain FCP currency. Should discuss flight procedures/conduct, FCF requirements, FCF procedures. Conduct: QA/Maintenance brief, ADB review, exterior/interior inspection, engine start, taxi, takeoff, climb, level at altitude, FCF checks, enroute descent, penetration, landing, post-flight, debrief QA/Maintenance, sign off FCF card and required maintenance paperwork.

Performance Standard. Satisfactorily execute procedures per the NAVAIR 01-C20GAAA-1F, OPNAVINST 3710.7_, and OPNAVINST 4790.2_.

Prerequisite. FCF-6602

Crew Requirements. FCP, CP, and CC

2.13.11 RECR. To provide required re-currency training to maintain FAA type requirements and Squadron re-currency requirements for the C-20G. This training will be conducted at an approved CACT facility.

RECR-6700   16.0   365   B,SC,R,M   E   CACT GROUND SCHOOL

Goal. Complete Recurrent Ground School.

Requirement. Per CACT approved syllabus.

Performance Standard. Per CACT approved syllabus.

RECR-6701-6703   12.0   365   B,SC,R,M   (N*) E   S   1   C-20G

Goal. Complete Recurrent Flight Phase.

Requirement. Per CACT approved syllabus.

Performance Standard. Per CACT approved syllabus.

2.14 AVIATION CAREER PROGRESSION MODEL (ACPM)

2.14.1 Purpose. To enhance professional understanding of Marine Aviation and the MAGTF and to ensure aviators possess the requisite skills to fill battle command and battle staff positions in support of the ACE and the MAGTF in a joint environment. ACPM academic training requirements will be tracked and managed in M-SHARP. Commanding officers shall ensure the requisite ACPM training requirements have been met prior to designating flight leaders.

2.14.2 Stages. The following stages are included in the ACPM:

        Core Skill Training Events

        Mission Skill Training Events

        Flight Leadership Training Events

        Section Leader

        Division Leader

2.14.3 ACPM Core Skill Training Events

2.14.3.1 Purpose. To provide and introduce basic integration of the ACE within the MAGTF and ACE Battle Staff planning.

2.14.3.2 General. The PUI must be qualified as a T3P prior to beginning this stage of training.

ACPM-8200   0.5   *   B,SC,R MACCS Agencies, Functions, and Control of Aircraft and Missiles

Learning Objectives

        Understand the organization of the MACG and the agencies provided by the MACG that form the MACCS.

        Understand the mission and tasks of the Tactical Air Command Center (TACC).

        Understand the mission and tasks of the Tactical Air Operations Center (TAOC).

Understand the mission and tasks of marine Air Traffic Control (MATC)
and the marine Air Traffic Control Mobile Team (MMT).

Understand the mission and tasks of the Direct Air Support Center
(DASC).

Understand the mission and tasks of the Low Altitude Air Defense (LAAD)
Battalion.

Understand the mission and tasks of the Marine Unmanned Air Vehicle
(VMU) squadron.
Understand the mission and tasks of the Marine Wing Communication
Squadron (MWCS).

ACPM-8201   0.5   *   B,SC,R   MWCS Brief

Learning Objectives

From a list be able to identify the core competencies of the MWCS.

Without the aid of reference, describe the organization of the MWCS.

Without the aid of reference, identify key equipment used by the MWCS
to support the MACCS.

ACPM-8202   0.8   *   B,SC,R   ACA and Airspace

Learning Objectives

List the three fundamental principles of airspace command and control.

List and explain the three tenets of the integrated combat airspace
command and control system.

Describe the responsibilities of the ACA.

Describe the responsibilities of the AMCT.

Understand the definitions of Air Direction and Air Control as well as
the subsets of those two major categories.

List a variety of items encompassed within the ACP.

ACPM-8210   0.7   *   B,SC,R   Aviation Ground Support

Learning Objectives

Identify the organization responsible for providing Aviation Ground
Support (AGS) to the MAW.

Identify the four concepts for MAGTF Forward Operating Bases (FOBs).

Identify the five activities the Marine Wing Support Squadron (MWSS)
performs for the ACE when deployed.

Identify the four classifications of FOBs and state the distinguishing
characteristics of each.

Identify the fourteen functions of AGS.

ACPM-8230   0.5   *   B,SC,R   ACE Battle Staff

Learning Objectives

To introduce and explain the intel capabilities/products available to the ACE/MAGTF.

To introduce ALSA comm brevity terms.

Introduce functions and responsibilities of ACE Battle Staff.

ACPM-8231   0.5   *   B,SC,R   Battle Command Display

Learning Objectives

Introduce the Battle Command Display.
ACPM-8240   1.7   *   B,SC,R   Six Functions of Marine Aviation

Learning Objectives

To better understand the 6 functions of Marine Corps Aviation.

ACPM-8241   1.3   *   B,SC,R   JTAR/ASR Introduction and Practical Application

Learning Objectives

Understand the ATO cycle and the request process.

Write a technically correct JTAR.

Write a technically correct EW JTAR.

Write a technically correct EARF.

Write a technically correct ASR.

Track submitted air requests using various web-based programs.

Introduce the Automated Tracking System.

ACPM-8242   0.5   *   B,SC,R   Site Commander Primer

Learning Objectives

Introduce fundamentals and functions of Site Command.

ACPM-8250   0.9   *   B,SC,R   Theater Air Ground System (TAGS)

Learning Objectives

Identify the primary characteristics of TAGS.

Identify the primary surveillance agency within the Theater Air Control System.

Identify the element within the Army Air and Ground System responsible for integrating operational fires and synchronizing deep operations.

Identify the element within the Navy's Tactical Air Control System responsible for coordinating power projection.
Identify the commander within an amphibious task force who is subordinate to the Air Defense Commander (ADC) and responsible for the detection and engagement of hostile tracks in the AOA.

Identify the Marine Corps' contribution to overall Theater Air Ground System.

2.14.4 <u>ACPM Mission Skill Training Events</u>

2.14.4.1 <u>Purpose</u>. To provide and introduce basic integration of the ACE within the MAGTF and Joint environment.

2.14.4.2 <u>General</u>. The PUI must be qualified as a T3P prior to beginning this stage of training.

<u>ACPM-8300   0.9   *   B,SC,R   Air Defense</u>
<u>Learning Objectives</u>

Outline the principles of Air Defense.

Understand the composition of an Integrated Air Defense System (IADS).
Define Active and Passive Air Defense.

Identify the (4) primary pillars of Passive Air Defense operations.

<u>ACPM-8310   0.8   *   B,SC,R   Forward Arming Refueling Point (FARP)</u>
<u>Operations</u>

<u>Learning Objectives</u>

State the mission and objective of a FARP.

Explain the planning considerations of a FARP.

Explain the techniques of employment.

Describe the procedures necessary for movement of aircraft through a FARP and various layouts.

<u>ACPM-8311   0.9   *   B,SC,R   Marine Corps Tactical Fuel Systems</u>

<u>Learning Objectives</u>

State the basic history of the Bulk Fuel community.

Identify the four major fuel systems and their capabilities.

State the job description of the Bulk Fuel Specialist.

ACPM-8320   1.0   *   B,SC,R   Joint Structure & Joint Air Operations

Learning Objectives

Understand the criteria used by the Joint Force Commander (JFC) when
selecting the Joint Forces Air Component Commander (JFACC).
Understand the duties and responsibilities of the five divisions of
Joint Air and Space Operations Center (JAOC).

Know the types of sorties the MAGTF Commander must make available to
the JFACC for tasking.

Understand the primary responsibilities of the Area Air Defense
Commander (AADC).

Understand the purpose of the Airspace Control Order (ACO).

Become familiar with the six phases of the Joint Air Tasking Cycle.

ACPM-8321   0.4   *   B,SC,R   Joint Air Tasking Cycle Phase 1: Strategy
Development

Learning Objectives

Understand how the JFC normally provides air apportionment guidance to
the Joint Forces Air Component Commander (JFACC).

Understand the air apportionment process.

Understand who drafts the AOD and what the AOD provides the JAOC.

Understand how objectives and tasks are prioritized.

Prerequisite. ACPM-8320.

ACPM-8322   0.4   *   B,SC,R   Joint Air Tasking Cycle Phase 2: Target
Development

Learning Objectives

Understand the purpose of the Joint Integrated Prioritized Target List
(JIPTL).

Understand the purpose for the joint targeting coordination board and
its participants.

Understand the target development process.

Know the product of phase 2 of the joint air tasking cycle.

Understand what provides the foundation for phase 2 of the joint air
tasking cycle.

Prerequisite. ACPM-8321.

ACPM-8323   0.4   *   B,SC,R   Joint Air Tasking Cycle Phase 3:
Weaponeering and Allocation

Learning Objectives

Understand weaponeering and how it is conducted within the joint air
tasking cycle.
Understand the Allocation Request Message (ALLOREQ) and how it is used
in producing the MAAP.

Understand the air allocation process.

Understand the purpose of the MAAP team and what is contained in the
MAAP.

Understand the purpose of the Sortie Allocation (SORTIEALLOT) message.

Prerequisite. ACPM-8322.

ACPM-8324   0.4   *   B,SC,R   Joint Air Tasking Cycle Phase 4: Joint
ATO Production
Learning Objectives

Understand the role of joint ATO production within the joint air
tasking cycle.

Understand the responsibilities of the joint ATO production team.

Understand the processes used in the production of the joint air
tasking order.

Understand how TBMCS 1.1.3 is used to produce the joint air tasking
order.

Prerequisite. ACPM-8323.

ACPM-8325   0.4   *   B,T,SC,R   Joint Air Tasking Cycle Phase 5: Force
Execution

Learning Objectives

Understand the primary functions and responsibilities of the AOC.

Understand how the JAOC organizes for the execution phase.

Understand how TBMCS 1.1.3 is used during the execution phase.

Prerequisite. ACPM-8324.

ACPM-8326   0.4   *   B,SC,R   Joint Air Tasking Cycle Phase 6: Combat
Assessment

Learning Objectives

Understand the three inter-related components of combat assessment.

Understand the key factors concerning the three components of combat assessment.

Understand the purpose of BDA based upon current doctrine.

Understand physical damage, functional damage, and the target system assessment process.
Understand the purpose of the re-attack recommendation.

Prerequisite. ACPM-8325.

ACPM-8340   0.5   *   B,SC,R   Integrating Fires & Airspace within the MAGTF

Learning Objectives

List the (14) Fire Support Principles.

Identify and discuss the (2) types of FSCMs.

Identify where most of the fire support coordination occurs within the MAGTF.
Discuss the purpose of ACMs.

Discuss the need for integrating FSCMs and ACMs.

Identify the required components of the JFA as an FSCM.
Identify the differences between the JFA and GARS.

ACPM-8350   0.9   *   B,SC,R   Phasing Control Ashore

Learning Objectives

Identify the Navy agency most akin to the LF FSCC.

Identify what must be established ashore for control to be phased from the Navy TACC to the landing force.

ACPM-8351   0.5   *   B,SC,R   TACRON Organizations and Functions

Learning Objectives

TBD

2.14.5 ACPM Flight Leadership Training Events

2.14.5.1 Purpose. To provide the prospective flight leader the concepts of basic integration of the MAGTF within the Joint environment.

2.14.5.2 General. Completion of Flight Leadership Training Events is required prior to the following flight leadership designations:

Section Leader: ACPM-8630, ACPM-8660.

Division Leader: ACPM-8640, ACPM-8641, ACPM-8620.

However, the PUI does not need to be in a specific flight leader syllabus in order to receive 8600 level training events.

ACPM-8630   1.0   *   B,SC,R   Tactical Air Command Center (TACC)

Learning Objectives

Without aid of references, identify the mission of the TACC.

Without aid of references, identify the major tasks/duties of the TACC.

Without aid of references, identify the three sections being supported by intelligence.

Without aid of references, identify the key TACC personnel and their responsibilities.

Without aid of references, identify the equipment associated with a full TACC capability.

ACPM-8660   0.5   *   B,SC,R   Joint Ops Introduction

Learning Objectives

Understand Joint Operation Command relationships.

Understand the main responsibilities for each Functional Component Commander.

ACPM-8640   0.9   *   B,SC,R   Joint Data Network

Learning Objectives

Understand the four components of the JDN.

Understand the differences between the Single Integrated Air Picture (SIAP), Common Tactical Picture (CTP), and Common Operational Picture (COP).

Understand the differences between Sensor Network(s), Joint Data Network (JDN), and Joint Planning Network (JPN).

Understand how the ACE builds its CTP and how information is shared throughout the ACE and the Marine Air Command and Control System (MACCS).

Know the primary system that will "tie in" the intelligence flow throughout the Marine Aviation Command and Control System (MACCS).

ACPM-8641   1.3   *   B,SC,R   MAGTF Theater and National ISR Employment

Learning Objectives

Define priority intelligence requirement.

Identify basic tenets of the National Imagery Interpretability Rating Scale.

Recognize strengths and weaknesses of the EO, SAR, and IR sensors found on national satellites.

Know the three categories of SIGINT.

Identify the information requirements used in the UAS planning process.

Identify what effective planning of UAS employment involves.

Identify key planning considerations outlined for UAS employment.

Define "Non-Traditional ISR".

Identify the most common shortfalls on JTARs submitted for NTISR support.

Identify the most common shortfalls on JTARs submitted for ATARS support.

Identify different imagery products ATARS can provide.

ACPM-8620   0.5   *   B,SC,R   ESG/CSG Integration

Learning Objectives

TBD

2.15 T&R SYLLABUS MATRIX

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN B	S	C	R	MAINTAIN	ACADEMIC #	TIME	SIMULATOR #	TIME	FLIGHTS #	TIME	COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
1000 ACAD	ACAD	CACT Ground School	1000	X	X		X		1	80.0						G		*				1000
		ACAD TOTAL							1	80.0												
1000 CACT	CACT	SIM 1	1001	X	X		X				1	4.0			(N*)	S	1	*	1000			1001
	CACT	SIM 2	1002	X	X		X				1	4.0			(N*)	S	1	*	1001			1002
	CACT	SIM 3	1003	X	X		X				1	4.0			(N*)	S	1	*	1002			1003
	CACT	SIM 4	1004	X	X		X				1	4.0			(N*)	S	1	*	1003			1004
	CACT	SIM 5	1005	X	X		X				1	4.0			(N*)	S	1	*	1004			1005
	CACT	SIM 6	1006	X	X		X				1	4.0			(N*)	S	1	*	1005			1006
	CACT	SIM 7	1007	X	X		X				1	4.0			(N*)	S	1	*	1006			1007
	CACT	SIM 8 Intro to Local Operations	1008	X	X		X				1	4.0			(N*)	S/A	1	*	1007			1008
	CACT	SIM 9 Night Familiarization	1009	X	X		X				1	4.0			(N*)	S/A	1	*	1008			1009
	CACT	NATOPS Check	1010	X	X		X				1	4.0			(N*)	S/A	1	*	1009		X	1010
		CACT TOTAL									10	40.0										
2000 T2P	T2P	Intro to Left Seat Operations	2101	X				X					1	4.0	D	A	1	365	1010			2101
	T2P	Night Operations	2102	X									1	2.0	N*	A	1	*	2101			2102
	T2P	NATOPS Eval	2103	X	X		X						1	2.5	(N*)	A	1	*	2102		X	2103
		T2P TOTAL											3	8.5								
2000 TAC	TAC	Intro to TAC	2201	X	X		X	X					1	4.0		(N*)	S/A	1	365	6100,6405,1000 TOTAL HOURS, 650 FW HOURS,100 C-20G HOURS			2201
	TAC	Practice TAC Responsibilities	2202	X	X		X						1	4.0		(N*)	S/A	1	*	2201			2202
	TAC	LOFT	2203	X	X		X						1	4.0		(N*)	S/A	1	*	2202			2203
		TAC TOTAL										3	12.0									
3000 OSA	OSA	Aircraft Proficiency	3101	X	X		X	X					1	4.0	(N*)	A/S	1	180	6100	2101, 2201		3101
	OSA	Operational Aircraft Support	3102	X	X		X	X					1	4.0	(N*)	A/S	1	180	6100	2101, 2201		3102
		OSA TOTAL										2	8.0									
5000 ACAD	ACAD	IUT Ground School	5000	X	X		X		1	5.0						G		*	6602, 1000 FW HOURS, 100 C-20G TAC HOURS		X	5000
		ACAD TOTAL							1	5.0												
5000 IUT	IUT	Instructional Techniques	5001	X	X		X				1	4.0			(N*)	S/A	1	*	5000		X	5001
	IUT	Instructional Observation	5002	X	X		X				1	4.0			(N*)	S/A	1	*	5001		X	5002
	IUT	Practice Instructing	5003	X	X		X				1	4.0			(N*)	S/A	1	*	5002		X	5003
	IUT	IUT Eval	5004	X	X		X						1	3.0	(N*)	A/S	1	*	5003		X	5004
		IUT TOTAL									3	12.0	1	3.0								

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	B	S	C	R	MAINTAIN	ACADEMIC #	TIME	SIMULATOR #	TIME	FLIGHTS #	TIME	COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
	ACAD	NATOPS Open Book Exam	6000	X	X		X	X	1	4.0						G		365			X	6000
	ACAD	NATOPS Closed Book Exam	6001	X	X		X	X	1	2.0						G		365	6000		X	6001
	ACAD	NATOPS Oral Exam	6002	X	X		X	X	1	2.0						G		365	6000, 6001		X	6002
6000 ACAD	ACAD	Inst Ground School & Exam	6003	X	X		X	X	1	8.0						G		365			X	6003
	ACAD	Instrument Oral Exam	6004	X	X		X	X	1	2.0						G		365	6003		X	6004
	ACAD	CRM Ground	6005	X	X		X	X	1	2.0						G		365			X	6005
	ACAD	FCF Ground Exam	6006	X	X		X		1	2.0						G		*			X	
		ACAD TOTAL							7	22.0												
	NTPS	T2P NATOPS Evaluation	6100	X	X		X	X					1	2.5	(N*)	S/A	1	365	6000, 6001, 6002	6301	X	6100
6000 NTPS	NTPS	TAC NATOPS Evaluation	6101	X	X		X	X					1	2.5	(N*)	S/A	1	365	6000, 6001, 6002, 6406, 700 FW HOURS	6301	X	6100
	NTPS	CRM Flight	6102	X	X		X	X					1	2.5	(N*)	S/A	1	365	6005		X	6101
		NTPS TOTAL											3	7.5								
6000 INST	INST	Standard Instrument Evaluation	6200	X	X		X	X					1	2.0	(N*)	S/A	1	365	6003, 6004		X	6200
	INST	Special Instrument Evaluation	6201	X	X		X	X					1	2.0	(N*)	S	1	365	6003, 6004, 6101	6200	X	6201
		INST TOTAL											2	4.0								
6000 EP	EP	Monthly EP Exam	6300	X	X		X	X	1	1.0						G		30			X	6300
	EP	90 Day EP Practical Review	6301	X	X		X	X			1	1.0					S/A	1	90			X	6301
		EP TOTAL							1	1.0	1	1.0										
	IOE	Practice Domestic T2P Roles and Responsibilities	6401	X									1	5.0	(N*)	A	1	*	6100, 25 HOURS IN C-20G			6403
	IOE	Practice International T2P Roles and Responsibilities	6402	X									1	5.0	(N*)	A	1	*	6100, 25 HOURS IN C-20G			6404
6000 IOE	IOE	Introduce Special Qualification Airfields (SQA)	6403	X									1	5.0	(N*)	A	1	*	6401, 6402			
	IOE	Introduce High Elevation Airfield Operations	6404	X									1	5.0	(N*)	A	1	*	6401, 6402			
	IOE	T2P IOE Stage Check	6405	X									1	5.0	(N*)	A	1	*	6403, 6404, 75 HOURS IN C-20G		X	
		IOE TOTAL											5	25.0								
	IOE	Practice TAC Roles and Responsibilities	6406	X									1	5.0	(N*)	A	1	*	2203			6405
6000 IOE	IOE	TAC ICAO Evaluation PF during ICAO Mission (Route Check)	6407	X									1	5.0	(N*)	A	1	*	6406		X	6406
	IOE	TAC ICAO Evaluation PM during ICAO Mission (Route Check)	6408	X									1	5.0	(N*)	A	1	*	6407		X	
		IOE TOTAL											5	15.0								
	FCF	FCF (A-Card) Practice	6601	X	X		X				1	4.0				D	S	1	*	2203		X	6601
6000 FCF	FCF	FCF Evaluation Flight	6602	X	X		X						1	4.0	D	A	1	*	6101, 6601		X	
	FCF	FCF Currency Flight	6603	X	X		X	X							D	S/A	1	180	6602			
		FCF TOTAL									1	4.0	1	4.0								

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN B	S	C	R	MAINTAIN	ACADEMIC #	TIME	SIMULATOR #	TIME	FLIGHTS #	TIME	COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
	RECR	Recurrent Ground School (CACT)	6700	X	X		X	X	1	16.0						G		365	6100		X	6700
6000 RECR	RECR	Recurrent Sim 1 (CACT)	6701	X	X		X	X			1	4.0			(N*)	S	1	365	6700			6701
	RECR	Recurrent Sim 2 (CACT)	6702	X	X		X	X			1	4.0			(N*)	S	1	365	6701			6702
	RECR	Recurrent Sim 3 (CACT)	6703	X	X		X	X			1	4.0			(N*)	S	1	365	6702			6703
		RECR TOTAL							1	16.0	3	12.0										
	ACPM	MACCS Agencies, Functions and Contol of Aircraft and Missiles	8200	X	X		X		1	0.5						G		*				8200
	ACPM	MCWS Brief	8201	X	X		X		1	0.5						G		*				8201
	ACPM	ACA and Airspace	8202	X	X		X		1	0.8						G		*				8202
	ACPM	Aviation Ground Support	8210	X	X		X		1	0.7						G		*				8210
	ACPM	ACE Battle Staff	8230	X	X		X		1	0.5						G		*				8230
	ACPM	Battle Command Display	8231	X	X		X		1	0.5						G		*				8231
	ACPM	Six Functions of Marine Aviation	8240	X	X		X		1	1.7						G		*				8240
	ACPM	JTAR/ASR Introduction and Practical Application Class	8241	X	X		X		1	1.3						G		*				8241
	ACPM	Site Command Primer	8242	X	X		X		1	0.5						G		*				8242
	ACPM	Theater Air Ground System (TAGS)	8250	X	X		X		1	0.9						G		*				8250
	ACPM	Air Defense	8300	X	X		X		1	0.9						G		*				8300
	ACPM	Forward Arming and Refueling Point (FARP) Operations	8310	X	X		X		1	0.8						G		*				8310
8000 ACPM	ACPM	Marine Corps Tactical Fuel Systems	8311	X	X		X		1	0.9						G		*				8311
	ACPM	Ace Battle Staff	8320	X	X		X		1	1.0						G		*				8320
	ACPM	Joint Air Tasking Cycle Phase 1: Strategy Development	8321	X	X		X		1	0.4						G		*				8321
	ACPM	Joint Air Tasking Cycle Phase 2: Target Development	8322	X	X		X		1	0.4						G		*				8322
	ACPM	Joint Air Tasking Cycle Phase 3: Weaponing and Allocation	8323	X	X		X		1	0.4						G		*				8323
	ACPM	Joint Air Tasking Cycle Phase 4: Joint ATO Production	8324	X	X		X		1	0.4						G		*				8324
	ACPM	Joint Air Tasking Cycle Phase 5:	8325	X	X		X		1	0.4						G		*				8325
	ACPM	Force Execution	8326						1	0.4						G						8326
	ACPM	Joint Air Tasking Cycle Phase 6: Combat Assesment	8340	X	X		X		1	0.5						G		*				8340
	ACPM	Integrating Fires and Airspace within the MAGTF	8350	X	X		X		1	0.9						G		*				8350
	ACPM	Establishing Control Ashore	8351	X	X		X		1	0.5						G		*				8351
	ACPM	TACRON Organizations and Functions	8630	X	X		X		1	1.0						G		*				8630

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN B	S	C	R	MAINTAIN	ACADEMIC #	TIME	SIMULATOR #	TIME	FLIGHTS #	TIME	COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
	ACPM	Tactical Air Command Center (TACC)	8660	X	X		X		1	0.5						G		*				8660
	ACPM	Joint Ops Intro	8640	X	X		X		1	0.9						G		*				8640
	ACPM	Joint Data Network	8641	X	X		X		1	1.3						G		*				8641
	ACPM	ESG/CSG Integration	8620	X	X		X		1	0.5						G		*				8620
		CACT TOTAL							28	20.0												
		TOTALS							39	144.0	21	81.0	22	75.0								

Enclosure (1)

CHAPTER 3

UC-20G CREW CHIEF
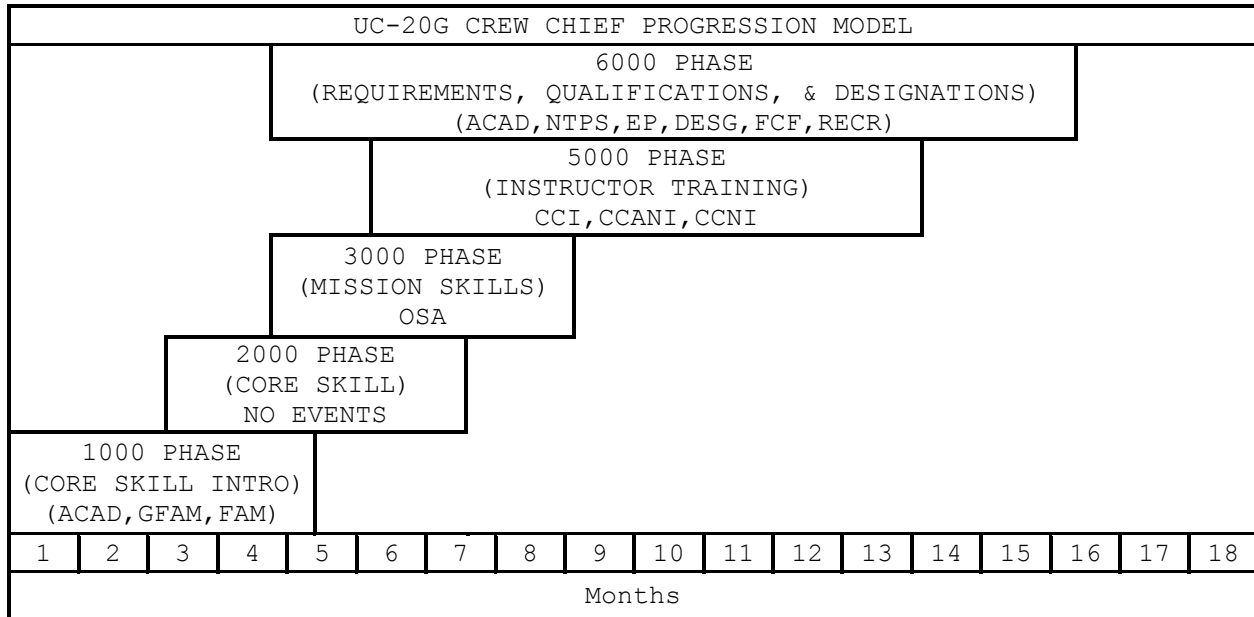
CHAPTER 3

UC-20G CREW CHIEF

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

3.1 <u>TRAINING PROGRESSION MODEL</u>

     Represents the recommended training progression for the UC-20G Crew Chief.

     Represents minimum-to-maximum time-to-train by Phase.

     Units should use the model as a guide to generate individual training plans.

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│                   UC-20G CREW CHIEF PROGRESSION MODEL                     │
│            ┌─────────────────────────────────────────────────┐           │
│            │                   6000 PHASE                     │           │
│            │    (REQUIREMENTS, QUALIFICATIONS, & DESIGNATIONS) │           │
│            │          (ACAD,NTPS,EP,DESG,FCF,RECR)            │           │
│         ┌──┴──────────────────────────────────────────┐──────┘           │
│         │                5000 PHASE                    │                  │
│         │            (INSTRUCTOR TRAINING)             │                  │
│      ┌──┴──────────────────────────────┐ CCI,CCANI,CCNI│                 │
│      │            3000 PHASE            │───────────────┘                 │
│      │         (MISSION SKILLS)         │                                 │
│   ┌──┴──────────────────────┐   OSA     │                                 │
│   │        2000 PHASE        │───────────┘                                 │
│   │       (CORE SKILL)       │                                            │
│┌──┴────────────────┐ NO EVENTS│                                           │
││    1000 PHASE      │──────────┘                                          │
││ (CORE SKILL INTRO) │                                                     │
││  (ACAD,GFAM,FAM)   │                                                     │
│├──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┤                      │
││ 1│ 2│ 3│ 4│ 5│ 6│ 7│ 8│ 9│10│11│12│13│14│15│16│17│18│                     │
│├──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┴──┤                      │
││                      Months                         │                     │
└─────────────────────────────────────────────────────────────────────────┘
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3.2 <u>PROGRAMS OF INSTRUCTION (POI)</u>

3.2.1 <u>General</u>. Represents the average time-to-train by Phase. The time required to train a UC-20G Crew Chief to completion of the Core Plus Phase is based off of flight hour requirements that are published in the UC-20G NATOPS manual. Assignment to a specific POI is determined by previous Aircrew experience. Crew Chief Under Instruction (CCUI) without prior Naval Crew Chief experience shall be assigned to the Basic (B). CCNI who were previously designated Naval Crew Chief shall be assigned to the Basic (B) POI and may be designated as UC-20G CC upon successful completion of the Basic (B) POI. Those Crew Chief who were previously designated a UC-20G CC and are returning to a VMR shall be assigned to the Refresher (R) POI. When a crewmember completes a stage of training, that crewmember needs only to maintain proficiency in the (M) coded events for that stage to remain proficient.

3.2.2 <u>Basic (B) POI</u>. Basic (B) Crew Chief shall fly the entire syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1-16	Core Skill Introduction Training	CACT/VMR Det.
8-32	Core/Mission Skill Training	CACT/VMR Det.
32-56	CCI/CCANI/CCNI	CACT/VMR Det.

3.2.3 <u>Refresher (R) POI</u>. Refresher Crew Chief shall fly those events annotated with a R.   Commanding officers/OICs will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Crew Chief with a view towards combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1-5	Core Skill Introduction Training	CACT/VMR Det.
6-12	Core Skill Training	CACT/VMR Det.
12-26	Mission Skill Training	CACT/VMR Det.

3.3 <u>PROFICIENCY & CURRENCY</u>

3.3.1 <u>Proficiency</u>. Proficiency is a measure of achievement of a specific skill. Refly factors establish the maximum time between demonstration of those particular skills. To regain proficiency, an individual shall complete the delinquent events with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with an instructor from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, the instructor shall regain proficiency with another aircraft commander or as designated by the commanding officer.

3.3.2 <u>Currency</u>. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in Chapter 3 of the Aviation T&R Program Manual.

3.4 <u>INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS</u>

3.4.1 Management of individual CSP serves as the foundation for developing proficiency requirements.

3.4.2 Individual CSP is a "Yes/No" status assigned to an individual by Core Skill. When an individual attains and maintains CSP in a Core Skill, the individual counts towards CMTS Unit CSP requirements for that Core Skill.

3.4.3 Proficiency is attained by individual Core Skill where the training events for each skill are determined by POI assignment.

3.4.4 Once proficiency has been attained by Core Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the maintain table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Core Skill.

Note
Individuals may be attaining proficiency in some Core Skills while maintaining proficiency in other Core Skills.

3.4.5 Once proficiency has been attained, should one lose proficiency in an event in the "Maintain POI" column, proficiency can be re-attained by demonstrating proficiency in the delinquent event. Should an individual lose

proficiency in all events in the "Maintain POI" column by Core Skill, the individual will be assigned to the Refresher POI for that Skill. To regain proficiency for that Core Skill the individual must demonstrate proficiency in all R-coded events for that Skill.

3.5 <u>INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS</u>

3.5.1 Management of individual MSP serves as the foundation for developing proficiency requirements in DRRS-MC.

3.5.2 Individual MSP is a "Yes/No" status assigned to an individual by Mission Skill. When an individual attains and maintains MSP in a Mission Skill, the individual counts towards CMMR-RR Unit MSP requirements for that Mission Skill.

3.5.3 Proficiency is attained by individual Mission Skill where the training events for each skill are determined by POI assignment.

3.5.4 Once proficiency has been attained by Mission Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Mission Skill.

Note
Individuals may be attaining proficiency in some Mission Skills
while maintaining proficiency in other Mission Skills.

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

UC-20G CREW CHIEF ATTAIN AND MAINTAIN MISSION SKILL PROFICIENCY (3000 Phase)					
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY		MAINTAIN POI
			BASIC POI	REFRESHER POI	
OSA	OSA	OPERATIONAL SUPPORT AIRLIFT	3101	3101R	3101R
			3102	3102R	3102R

NOTE
Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

3.6 <u>INDIVIDUAL CORE PLUS SKILL PROFICIENCY REQUIREMENTS</u>

3.6.1 Management of individual CPSP serves as the foundation for developing proficiency requirements.

3.6.2 Individual CPSP is a "Yes/No" status assigned to an individual by Core Plus Skill. When an individual attains and maintains CPSP in a Core Plus Skill, the individual counts towards CMMR/CMTS Unit CPSP requirements for that Core Plus Skill.

3.6.3 Proficiency is attained by individual Core Plus Skill where the training events for each skill are determined by POI assignment.

3.6.4 Once proficiency has been attained by Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain table and in the Maintain POI column of the

Attain and Maintain Table. An individual maintains proficiency by individual Core Plus Skill.

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

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

3.7 REQUIREMENTS, QUALIFICATIONS, AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all 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 Aircrew Performance Records (APR) and NATOPS jackets. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events

INDIVIDUAL DESIGNATION REQUIREMENTS UC-20G CREW CHIEF	
Designation	**Initial Event Designation Requirements**
CC	6100R
CCI	5010R
CCANI	5011R
CCNI	5012R
FCF	6601R
Qualification	**Initial Event Qualification Requirements**
NATOPS	6000,6001R,6002R,6101R

3.8 SYLLABUS NOTES

3.8.1 All events shall begin with a comprehensive brief with emphasis on administrative procedures, CRM, mission performance standards and aircrew expectations.

3.8.2 All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance utilizing all evaluation techniques available.

3.8.3 An ATF is required for any initial event completed by a Basic or Refresher Transport Aircrewman, or as recommended by the squadron Standardization Board. If the commanding officer has waived/deferred a syllabus sortie, the squadron training officer shall place a waiver/deferral letter in section 3 of the APR.

3.8.4 Event Conditions. Refer to the following table for required event conditions.

Code	Environmental Condition
D	Shall be flown or conducted during day
N	Shall be flown or conducted at night (using available night vision devices or flown unaided) at least 30 minutes after official sunset.
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided
D/NS	Shall be flown both day and night conditions, unless flown in the aircraft, in which case the event may be flown during day or night conditions
NS	Shall be flown or conducted at night using available night vision devices at least 30 minutes after official sunset
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used
N*	Event Shall be flown or conducted at night unaided
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided

3.8.5 Event Format Coding. The following format is used to describe aircraft, simulator, and classroom events. To provide the Commanding Officer the maximum amount of flexibility for training, some events allow for the optional use of simulators or aircraft. Those types of events will use the designator A/S for aircraft preferred, simulator optional and S/A for simulator preferred, aircraft optional.

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1/          2/   3/    4/         5/  6/  7/  8/  /9
FAM-3000    2.0  180   B,SC,R,M   (N) E   A   1   C-20G
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1/ Stage-Training Code. A unique numeric four-digit training code has been assigned to each syllabus event. The first digit of the event training code shall begin with the appropriate phase series number (Core Skill Introduction events = 1XXX; Core Skill events = 2XXX; etc.). The second digit of a T&R code refers to the stage. The third and fourth digits refer to the individual events within a stage, in sequence.

2/ Projected Event Duration. Projected event duration should reflect the average time to execute the event requirement (actual time to execute the event may vary).

3/ Refly Factor. Refly (proficiency interval) factors reflect the maximum time between syllabus events. Refly are delineated in days. An asterisk (*) indicates the event has no refly interval, indicating a one-time training requirement (unless R-coded).

4/ Programs of Instruction

    a. B = Basic/Transition
    b. SC = Series Conversion
    c. R = Refresher
    d. IUT = Instructor Under Training

5/ Environmental Conditions. Pilots shall fly events annotated with an N at least 30 minutes after official sunset.

6/ <u>Evaluation</u>. An "E" shall be annotated here if the event is required to be evaluated.

7/ <u>Device Options</u>

DEVICE OPTIONS	
Code	Requirement
A	Event performed in aircraft.
S	Event performed in simulator or a simulated practical application.
A/S	Event performed in aircraft preferred/simulator optional.
S/A	Event performed in simulator preferred/aircraft optional.

8/ <u>Device Number</u>. The number of aircraft, simulator, or other device(s) required for the completion of the event.

9/ <u>Device Type</u>. Type of device required for the completion of the event.

3.8.6 <u>Classroom (CLSRM)</u>. CLSRM lessons comprise the majority of C-20G Ground School training. All aircrew shall complete the C-20G Ground School as prescribed by the CACT instructor. Completion of CACT Ground School shall be documented in the Aircrew Performance Record (APR). Courseware shall be reviewed on an annual basis to ensure proper content, concurrency with the aircraft and operating procedures.

3.9 <u>CORE SKILL INTRODCUTION (1000 PHASE)</u>

3.9.1 <u>General</u>. The Core Skill Introduction Phase is designed to familiarize the CCUI with all aspects of UC-20G systems and operations and designate a UC-20G Crew Chief upon successful completion. This stage is designed to ensure a high level of knowledge is attained through study and instruction while utilizing the aircraft as a training aid. In order to be successful, the CCUI must arrive at each event with an in-depth working knowledge of the systems and procedures covered by the event. If the CCUI does not have a satisfactory level of knowledge at the commencement of the event, the event shall be terminated and appropriate action taken.

3.10 <u>CORE INTRODUCTION STAGES</u>

UC-20G CORE INTRODUCTION STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
ACAD	3.10.1	3-7
GFAM	3.10.2	3-8
FAM	3.10.3	3-15

3.10.1 <u>Academic Ground School (ACAD)(1000 PHASE)</u>

3.10.1.1 <u>Purpose</u>. Provide CCUI with required Command Aircraft Crew Training (CACT) and an in-depth knowledge of the systems of the UC-20G

ACAD-1000   80.0   *   B,R   G

<u>Goal</u>. Upon completion, the student will be able to perform as a Crew Chief Under Instruction.

<u>Requirement</u>. Per CACT approved syllabus.

<u>Performance Standard</u>. Per CACT approved syllabus.

3.10.2 <u>GFAM</u>

3.10.2.1 <u>Purpose</u>. To build on the CCUI's academic training and to introduce CC responsibilities on the UC-20G.

3.10.2.2 <u>Crew Requirements</u>. Unless otherwise specified, a qualified crew chief may instruct all GFAM events, with the exception of GFAM 1125. The GFAM 1125 is a Progress Check and must be instructed by a CCANI or CCNI.

3.10.2.3 <u>Ground/Academic Training</u>. This stage relies heavily on ground instruction due to the academics required to learn the responsibilities of the UC-20G crew chief. As a result, many events require the aircraft as a training aid only and may or may not be conducted in conjunction with an actual flight event. If labeled FAM, the training event must be in conjunction with a flight.

GFAM-1101   2.0   *   B,R   A   1 C-20G

<u>Goal</u>. Introduce the CCUI to the UC-20G aircraft.

<u>Requirement</u>. Conduct a general aircraft familiarization discussion to include the main cabin area, cockpit, tail, galley, lavatory, baggage compartments and wheel wells. Introduce aircraft hazard areas, emergency equipment location, and Aircraft Discrepancy Book (ADB). Conduct emergency egress training.

<u>Performance Standard</u>. Have a working knowledge of general UC-20G systems and procedures.

<u>Prerequisite</u>. ACAD-1000

GFAM-1102   2.0   *   B   A   1 C-20G

<u>Goal</u>. Introduce Auxiliary Power Unit (APU) operation.

<u>Requirement</u>. Introduce general APU operation. Review normal and abnormal procedures IAW applicable directives. Introduce APU oil system servicing.

<u>Performance Standard</u>. Demonstrate thorough knowledge of the APU.

<u>Prerequisite</u>. GFAM-1101

GFAM-1103   2.0   *   B   A   1 C-20G

<u>Goal</u>. Introduce the AC electrical system.

<u>Requirement</u>. AC Electrical System Operation, AC EPMP operation and associated AC indications. Introduce all normal and abnormal AC operations IAW applicable directives.

<u>Performance Standard</u>. Demonstrate thorough knowledge of AC electrical system.

<u>Prerequisite</u>. GFAM-1102

GFAM-1104   2.0   *   B   A   1 C-20G

Goal. Introduce the DC electrical system.

Requirement. DC Electrical System Operation, DC EPMP operation and
associated DC indications. Introduce all normal and abnormal DC operations
IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of DC electrical
system.

Prerequisite. GFAM-1103

GFAM-1105   2.0   *   B   A   1 C-20G

Goal. Introduce the emergency electrical system.

Requirement. Introduce emergency electrical system operation and associated
indications. Introduce all normal and abnormal emergency electrical system
operations IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the   emergency
electrical system.

Prerequisite. GFAM-1104

GFAM-1106   2.0   *   B   A   1 C-20G

Goal. Review the C-20G electrical system.

Requirement. Review electrical System Operation, A/C Power System, D/C Power
System, emergency power, EPMP operation and associated indications. Review
all normal and abnormal emergency electrical system operations IAW applicable
directives.

Performance Standard. Demonstrate thorough knowledge of the UC-20G
electrical system.

Prerequisite. GFAM-1105

GFAM-1107   2.0   *   B   A   1 C-20G

Goal. Introduce the Flight and Auxiliary hydraulic system.

Requirement. Introduce Flight and Auxiliary Hydraulic
System general operation. Introduce all Flight and Auxiliary hydraulic
systems indications and all normal and abnormal procedures IAW applicable
directives. Introduce Flight and Auxiliary Hydraulic servicing.

Performance Standard. Demonstrate thorough knowledge of the flight and
auxiliary hydraulic systems.

Prerequisite. GFAM-1106

GFAM-1108   2.0   *   B   A   1 C-20G

Goal. Introduce the Combined and Utility hydraulic system.

Requirement. Introduce Combined and Utility Hydraulic System general
operation. Introduce all Combined and Utility hydraulic systems indications
and all normal and abnormal procedures IAW applicable directives. Introduce
Combined and Utility Hydraulic servicing.

Performance Standard. Demonstrate thorough knowledge of the combined and
utility hydraulic systems.

Prerequisite. GFAM-1107

GFAM-1109   2.0   *   B   A   1 C-20G

Goal. Review the hydraulic system.

Requirement. Review the UC-20G Hydraulic system, operation, indications, and
all normal and abnormal procedures.

Performance Standard. Demonstrate thorough knowledge of the UC-20G hydraulic
system.

Prerequisite. GFAM-1108

GFAM-1110   2.0   *   B   A   1 C-20G

Goal. Introduce the flight control system.

Requirement. Introduce Flight Control general operation to include
elevators, ailerons, spoilers, rudder, flaps, horizontal stabilizer, stall
warning/protection system, automatic flight guidance system, and wings.
Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the flight control
system.

Prerequisite. GFAM-1109

GFAM-1111   2.0   *   B   A   1 C-20G

Goal. Introduce the landing gear system.

Requirement. Introduce landing gear general operation to include NWS System,
brake system, tire and strut servicing and aircraft towing considerations.
Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the landing gear
system.

Prerequisite. GFAM-1110

GFAM-1112   2.0   *   B   A   1 C-20G

Goal. Introduce the fuel system.

Requirement. Introduce fuel System general operation to include fuel lines,
fuel tanks, fuel quantity indicating system, and fuel servicing procedures

and considerations. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the fuel system.

Prerequisite. GFAM-1101

GFAM-1113   2.0   *   B   A   1 C-20G

Goal. Introduce the potable water and waste disposal systems.

Requirement. Introduce potable water system general operation to include potable water filling, water testing procedures, wastewater disposal and servicing, and cold weather considerations. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the water and waste disposal systems.

Prerequisite. GFAM-1101

GFAM-1114   2.0   *   B   A   1 C-20G

Goal. Introduce the pneumatic system.

Requirement. Introduce pneumatic system general operation to include bleed air components and supplied systems, indications, and all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of pneumatic system.

Prerequisite. GFAM-1101

GFAM-1115   2.0   *   B   A   1 C-20G

Goal. Introduce the anti-ice and pitot-static system.

Requirement. Introduce anti-ice and pitot-static systems general operation to include ice and rain protection, wing anti-ice system, cowl anti-ice system, windscreen-heating system, and the pitot-static system. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of anti-ice and pitot-static system.

Prerequisite. GFAM-1114

GFAM-1116   2.0   *   B   A   1 C-20G

Goal. Introduce the air conditioning system.

Requirement. Introduce the air conditioning system general operation to include the refrigeration system, avionics equipment cooling, and indications. Review all normal and abnormal procedures applicable directives.

Performance Standard. Demonstrate thorough knowledge of air conditioning system.

Prerequisite. GFAM-1115
GFAM-1117   2.0   *   B   A   1 C-20G

Goal. Introduce the pressurization system and oxygen system.

Requirement. Introduce cabin pressurization system general operation to include outflow valve, normal and abnormal relief systems, and controls and indications. Introduce oxygen system general operation to include controls and indications, system component location, and component servicing. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the aircraft pressurization and oxygen systems.

Prerequisite. GFAM-1116

GFAM-1118   2.0   *   B   A   1 C-20G

Goal. Introduce the Tay 611-8 Engine compressor and turbine sections.

Requirement. Introduce basic jet engine components and operations specific to the UC-20G engine to include compressor section components, turbine section components, bypass and non-bypass air, engine airflow control, manual start valve operation, and engine ignition systems. Discuss how the powerplant fits in to the overall UC-20G system. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of powerplant's basic operation.

Prerequisite. GFAM-1101

GFAM-1119   2.0   *   B   A   1 C-20G

Goal. Introduce the Tay 611-8 Engine fuel system.

Requirement. Introduce engine fuel system general operation to include high-pressure boost pumps, filters, suction feeding, and combustion chamber nozzles. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of engine fuel system.

Prerequisite. GFAM-1118.

GFAM-1120   2.0   *   B   A   1 C-20G

Goal. Introduce the Tay 611-8 Engine oil system.

Requirement. Introduce engine oil system general operation to include tanks, lines, lubricating locations, heat transfer components, and engine oil system servicing. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of engine oil system.

Prerequisite. GFAM-1119

GFAM-1121   2.0   *   B   A   1 C-20G

Goal. Review the Tay 611-8 Engine.

Requirement. Review all aspects of the UC-20G power plant.

Performance Standard. Demonstrate thorough knowledge of the UC-20G power plant and all affected systems.

Prerequisite. GFAM-1120

GFAM-1122   2.0   *   B   A   1 C-20G

Goal. Introduce the fire detection and extinguishing system.

Requirement. Introduce the APU and engine fire systems general operation to include fire sensing, controls and indication, smoke and flame systems, and extinguishing systems. Introduce the master warning and caution system indications and operation. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of fire detection and extinguishing systems.

Prerequisite. GFAM-1121

GFAM-1123   2.0   *   B   A   1 C-20G

Goal. Introduce the Flight Management System (FMS).

Requirement. Introduce FMS general operation to include initialization and flight summary. Introduce instruments, navigation system, communication systems, and the autopilot and auto throttle systems. Review all normal and abnormal procedures IAW applicable directives.

Performance Standard. Demonstrate thorough knowledge of the FMS and related systems.

Prerequisite. GFAM-1101

GFAM-1124   2.0   *   B   A   1 C-20G

Goal. Introduce aircraft lighting systems, galley operations, door and stairway operations, and loadmaster duties.

Requirement. Introduce the general operation of the normal and emergency lighting, galley, airstair, and the cargo and baggage doors. Introduce loadmaster duties to include Form F and cargo and passenger loading.

Performance Standard. Demonstrate thorough knowledge of applied systems and be able to assist with loadmaster duties.

Prerequisite. GFAM-1101

GFAM-1125   2.0   *   B,R   E   A   1 C-20G

Goal. Progress check.

Requirement. Demonstrate knowledge of all UC-20G aircraft systems and procedures.

Performance Standard. Satisfactorily demonstrate aircraft systems and procedural knowledge during the course of an oral examination.

Prerequisite. NATOPS open and closed book exams in addition to all events in the stage.

Prerequisite. GFAM-1101 through GFAM-1124

GFAM-1126   2.0   *   B,R   A   1 C-20G

Goal. Certify CCUI as a tow tractor operator.

Requirement. Attend appropriate GSE courses.

Performance Standard. Demonstrate detailed knowledge of the landing gear system as it pertains to all tow tractor operations.

External Syllabus Support. Tow tractor.

GFAM-1127   2.0   *   B,R   A   1 C-20G

Goal. Certify CCUI in ground servicing procedure associated with the aircraft oxygen system.

Requirement. Attend appropriate GSE courses.

Performance Requirements. Demonstrate detailed knowledge of air conditioning system as it pertains to the external oxygen-servicing cart.

External Syllabus Support. Gaseous oxygen servicing cart.

GFAM-1128   2.0   *   B,R   A   1 C-20G

Goal. Certify CCUI in ground servicing procedures associated with aircraft systems requiring nitrogen servicing.

Requirement. Attend appropriate GSE courses.

Performance Standard. Demonstrate detailed knowledge of the landing gear and hydraulic systems as they pertain to the external nitrogen-servicing cart.

External Syllabus Support. Nitrogen servicing cart.

GFAM-1129   2.0   *   B,R   A   1 C-20G

Goal. Certify CCUI in operation of external AC and DC power units.

Requirement. Attend appropriate GSE courses.

Performance Standard. Demonstrate detailed knowledge of electrical system as it pertains to the external power cart.

External Syllabus Support. External AC and DC Power Unit.

GFAM-1130   2.0   *   B,R   A   1 C-20G

Goal. Certify CCUI in operation of external air cart.

Requirement. Attend appropriate GSE courses.

Performance Standard. Demonstrate proficiency in use of the external air cart.

External Syllabus Support. External air cart.

3.10.3 FAM

3.10.3.1 Purpose. To build on the CCUIs Ground training and introduce CC responsibilities on the UC-20G while in flight.

3.10.3.2 Crew Requirements. Unless otherwise specified, a qualified crew chief may instruct all FAM events with the exception of FAM 1215. The FAM 1215 is the FAM stage check flight and must be instructed by a CCANI or CCNI.

FAM-1201   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Introduce the CCUI to the UC-20G jump seat duties.

Requirement. Review aircrew brief and debrief and other crew chief specific duties. Review operations with emphasis on checklist procedures of both a normal and emergency nature to include the location and use of survival equipment, CAS and annunciator indications, emergency exits, and oxygen use. Review selected takeoff and landing emergencies. Instructor-selected in-flight malfunctions to include air and ground APU malfunctions.

Performance Standard. Provide CCUI an appreciation for basic pilot responsibilities and increase CCUI confidence while acting as a third cockpit crewmember.

Prerequisite. GFAM-1101

FAM-1202   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review APU operation and introduce its practical application.

Requirement. Review all normal and abnormal APU procedures to include APU Fire, APU Alternator Failure, APU ALT BRG FAIL, APU ALT HOT, APU MASTER WARNING, APU EXCEEDENCE, APU In-Flight Operation (Alternate Electrical Source), Electrical Load Warning System, E-BATT DISCH, E-BATT FAIL, and APU Oil System servicing. Discuss cold weather operations, crosswind landings, aircraft range and endurance performance, survival equipment use, cargo door operation, and the Minimum Equipment List (MEL). Instructor- selected limitations and emergencies.

Performance Standard. Demonstrate thorough knowledge in all aspects of APU operation.

Prerequisite. GFAM-1102

FAM-1203   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the electrical system and introduce its practical application.

Requirement. Review all normal and abnormal electrical system procedures to include EPMP operation and associated indications, battery integrity checks, alternator and converter failure (dual and single), APU in-flight operation (ELWS), L-R/APU Failed BRG, L-R/APU ALT HOT, L-R Converter HOT/FAN FAIL, TRU HOT/FAIL, L-R AC/DC Power Fail, Essential AC/DC BUS FAULT, Battery only operation/SEP operation, BATT 1-2 Charger Fail, and EPMP Power Fail. Review crew chief jump seat duties and MEL. Instructor- selected limitations and emergencies. Introduce concepts of Cockpit Resource Management (CRM): Adaptability and flexibility.

Performance Standard. Demonstrate thorough knowledge in all aspects of the electrical system.

Prerequisite. GFAM-1106,

FAM-1204   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the hydraulic system and introduce its practical applications.

Requirement. Review all normal and abnormal hydraulic system procedures and operation to include engine driven hydraulic pumps, auxiliary and utility pumps, normal and abnormal start indications, COMB HYD FAIL message, FLT HYD FAIL message, Dual Hydraulic system Failure, FLT/COMB HYD FLUID HOT message, partial flap landing, T/R unlock or deploy in-flight, yaw damper failure, and cargo door operation. Review crew chief jump seat duties and the MEL. Instructor-selected limitations and emergencies. Introduce concepts of CRM: Leadership.

Performance Standard. Demonstrate thorough knowledge in all aspects of the hydraulic system.

Prerequisite. GFAM-1109

FAM-1205   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the flight control system and introduce its practical application.

Requirement. Review all normal and abnormal flight control procedures and operation to include rudder limiting messages, flap and stabilizer operation, flight control runaway to hard over position, immovable flight controls, manual flight controls, stall barrier malfunction, ground spoiler failure, runaway electrical elevator trim, MACH trim compensation failure, failure of Stabilizer/Flap interconnect, wing flap alternate operation, undesired flap movement, and ACFT CONFIG Message. Review crew chief jump seat duties and the MEL. Instructor-selected limitations and emergencies. Introduce concepts of Cockpit CRM: Decision Making.

Performance Standard. Demonstrate thorough knowledge in all aspects of flight controls.

Prerequisite. GFAM-1110

FAM-1206   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the landing gear system and introduce its practical
application.

Requirement. Review all normal and abnormal landing gear procedures and
operation to include brakes and antiskid operation, NWS system operation and
failures, nutcracker system operation and failures, anti-skid fail message,
BRAKE FAIL message, Anti-skid-off braking, hot brakes, BRAKE PEDAL message,
multiple brake fail messages, alternate braking, landing gear failures,
alternate gear extension, partial gear landing, tire failure, nose gear
shimmy. Review crew chief jump seat duties, the MEL, and aircraft towing
procedures. Instructor-selected limitations and emergencies. Introduce
concepts of Cockpit CRM: Assertiveness.

Performance Standard. Demonstrate thorough knowledge in all aspects of the
landing gear systems.

Prerequisite. GFAM-1111

FAM-1207   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the fuel system and introduce its practical application.

Requirement. Review all normal and abnormal fuel system procedures and
operation to include balancing procedures, boost pump failures, fuel level
low message, fuel pressure low messages, filter messages, minimum fuel
procedures, suction feeding, system servicing (pressure, gravity, and de-
fueling). Review crew chief jump seat duties and the MEL. Instructor
selected limitations and emergencies. Introduce concepts of CRM:
Adaptability and Flexibility.

Performance Standard. Demonstrate thorough knowledge in all aspects of the
fuel system.

Prerequisite. GFAM-1112

FAM-1208   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the potable water and waste disposal systems and introduce
their practical application.

Requirement. Review all normal and abnormal procedures and operations as
they pertain to the potable water and waste disposal systems to include
water-testing procedures and system servicing. Review cold weather servicing
procedures, crew chief jump seat duties, and the MEL. Instructor-selected
limitations and emergencies. Introduce concepts of CRM: Mission Analysis.

Performance Standard. Demonstrate thorough knowledge in all aspects of the
potable water and waste disposal systems.

Prerequisite. GFAM-1113

FAM-1209   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the aircraft pneumatic, anti-ice, and pitot-static systems and
introduce their practical application.

Requirement. Review all normal and abnormal procedures and operation of the
pneumatic, wing and cowl anti-ice, and pitot-static systems to include PYLON
HOT message, AFT EQUIP HOT message, bleed air hot messages, bleed air high
pressure messages, wing hot messages, wing temp low messages, cowl anti-ice
overheat messages, cowl low pressure messages, pitot heat fail message,
standby pitot heat fail message, TAT/SAT probe heat failure, windshield heat
failure, and windshield crack/failure. Review crew chief jump seat duties and
the MEL. Introduce concepts of CRM: Situational Awareness.

Performance Standard. Demonstrate thorough knowledge in all aspects of the
pneumatic, anti-ice, and pitot-static systems.

Prerequisite. GFAM-1115

FAM-1210   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the air conditioning and pressurization systems and introduce
their practical application.

Requirement. Review all normal and abnormal procedures and operation of the
air conditioning and pressurization systems to include rapid decompression,
emergency descent, loss of automatic pressurization control, pressurization
system rate limiting, cabin differential 9.6/9.8 message, cabin pressure low
message, cooling turbine hot message, air conditioning smoke, smoke and fume
evacuation, display unit hot messages, display unit fan fail messages, symbol
generator hot messages, IRS fan fail messages, AHRS cool fail message.
Review crew chief jump seat duties, oxygen system operation and duration
charts, portable oxygen use, oxygen system servicing, CRM, and the MEL.
Instructor-selected limitations and emergencies.

Performance Standard. Demonstrate thorough knowledge in all aspects of the
air conditioning and pressurization systems.

Prerequisite. GFAM-1117

FAM-1211   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the Tay 611-8 powerplant and related systems and introduce
their practical application.

Requirement. Review all normal and abnormal procedures and operation of the
C-20G powerplant and its related systems to include start malfunctions,
start-valve malfunctions, engine failures (single and dual), single and dual
engine out considerations through all phases of flight, air start (immediate
and normal), engine vibration on the ground, engine synchronizer, approach
idle system, oil pressure low messages, oil filter bypass messages, and
engine oil servicing (normal and emergency). Review crew chief jump seat
duties, CRM, and the MEL. Instructor-selected limitations and emergencies.

Performance Standard. Demonstrate thorough knowledge in all aspects of the
powerplant and related systems.

Prerequisite. GFAM-1121

FAM-1212   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the APU and engine fire warning and extinguishing systems and introduce their practical application.

Requirement. Review all normal and abnormal procedures and operation of the APU and engine fire warning and extinguishing systems to include an APU fire test, engine fire and fault test, APU fire, engine fire, severe vibration or separation, engine hot messages, pylon hot messages, engine warning system malfunction, fire detection system fault, smoke and flame detect message, inside fire, smoke and fume evacuation, Aft lavatory smoke annunciator, fire extinguishing systems (engine, APU, portable). Review crew chief jump seat duties, CRM, aircraft performance (takeoff and climb), and the MEL. Instructor-selected limitations and emergencies.

Performance Standard. Demonstrate thorough knowledge in all aspects of the APU and engine fire warning and extinguishing systems.

Prerequisite. GFAM-1122

FAM-1213   3.0   *   B,R   (N*)   A   1 C-20G

Goal. Review the FMS and related FGC systems and introduce their practical application.

Requirement. Review the FMS and related FGC systems operation and procedures that pertain to the crew chief jump seat duties to include FMS initialization, flight summary, PERF INIT, TO INIT, TO DATA, LAND DATA, single-engine data, EGPWS modes and callouts, display Switching and symbol generator control check. Review normal and abnormal procedures to include autopilot malfunction, auto-throttle malfunction, display system failure, AFGCS failure, DAU CAS messages, FGC CAS messages, IRS/NAV CAS messages, in-flight communications failure and degradation, anti-hijacking procedures, over-water procedures. Review crew chief jump seat duties, aircraft performance (descent, landing), hot weather operations, foul weather considerations (wind-shear, turbulence, microburst, volcanic ash), CRM, and the MEL. Instructor-selected limitations and emergencies.

Performance Standard. Demonstrate thorough knowledge in all aspects of the FMS and related FGC systems.

Prerequisite. GFAM-1123

FAM-1214   3.0   *   B,R   N*   A   1 C-20G

Goal. Review aircraft lighting, galley operations, door and stairway operations, loadmaster duties and introduce their practical application.

Requirement. Review operation and procedures for the aircraft light system (normal and emergency), galley, loadmaster duties and responsibilities, doors and stairway. Review crew chief jump seat duties, CRM, and the MEL. Instructor-selected limitations and emergencies.

Performance Standard. Demonstrate thorough knowledge in all aspects of lighting, galley, and door systems.

Prerequisite. GFAM-1124

FAM-1215   3.0   *   B,R   (N*) E A   1 C-20G

Goal. Stage Check.

Requirement. Evaluate CCUI on systems knowledge and ground and flight performance on a local area trainer.

Performance Standard. Demonstrate extensive systems and procedural knowledge of the C-20G aircraft.

Prerequisite. Satisfactory completion of all 1000 stage events.

3.11 CORE PHASE (2000 PHASE). There are no Core Skill Phase events in the Crew Chief syllabus.

3.12 MISSION PHASE (3000 PHASE)

3.12.1 Purpose. This stage of training is designed to fulfill the requirement set in MCT 1.3.3.3.1, Conduct Aviation Support Operations.

3.12.2 Crew Requirement. TAC, CP, CC

3.13 MISSION STAGES

UC-20G MISSION STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
OSA	3.14.1	3-20

3.13.1 Operational Support Airlift (OSA)

3.13.1.1 Purpose. This stage of training is designed to fulfill the requirement set in MCT 1.3.3.3.1, Conduct Aviation Support Operations.

3.13.1.2 Crew Requirement. TAC, CP, CC

OSA-3101   4.0   180   B,R,M   (N*)   A   1 C-20G

Goal. Aircraft proficiency. Retain and maintain proficiency with all aspects of aircraft operation. Because of the design and operation of the UC-20G, a standard flight will usually consist of some visual and instrument flight operations resulting in proficiency in all aspects of operating the aircraft.

Requirement. Discuss selected systems. Demonstrate competence in all areas of C-20G CC responsibilities.

Performance Standard. CC must demonstrate knowledge of aircraft systems and ability to competently perform CC duties in all phases of flight.

Prerequisite. NTPS-6100

Crew Requirement. TAC, CP, CC, LM

OSA-3102   4.0   180   B,R,M   (N*)   A   1 C-20G

Goal. Conduct a line mission under actual or simulated tasking from Higher Headquarters.

Requirement. Conduct a line mission.

Performance Standard. Conduct a line mission involving (but not limited to) overwater flight, international airspace, or takeoffs and landings away from home station and outside of the local flying area. A line mission should involve some level of DV, general passenger, or cargo carrying operations. If CACT is being used to update proficiency, the mission planning phase must include the same level of preparation and products as an event flown in the actual aircraft.

Prerequisite. NTPS-6100

Crew Requirement. TAC, CP, CC, LM

3.14 INSTRUCTOR TRAINING PHASE (5000 PHASE)

3.14.1 General. The purpose of this phase of training is to train qualified Crew Chiefs to instruct various levels of instruction.

3.15 INSTRUCTOR TRAINING STAGES

UC-20G INSTRUCTOR TRAINING STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
ACAD	3.16.1	3-21
IUT	3.16.2	3-21
DESG	3.16.3	

3.15.1 ACAD

3.15.1.1 Purpose. To complete all academic requirements to prepare IUT for flight portion of training.

ACAD-5000   5.0   *   B,R   G

Goal. Crew Chief Instructor Under Training academic training.

Requirement. Complete the academic ground school for IUT.

Performance Standard. The IUT shall demonstrate knowledge of instructional procedures and techniques.

Prerequisites. DESG-6504, APRB recommendation

3.15.2 INSTRUCTOR UNDER TRAINING (IUT)

3.15.2.1 Purpose. Earn designation as Crew Chief Instructor (CCI).

3.15.2.2 General. Upon successful completion of IUT-502, CC may be designated a CCI by the Commanding Officer.

3.15.2.3 Crew Requirements. TAC, CP, CCI, CCIUI.

3.15.2.4 Ground/Academic Training. An in-depth oral examination shall be administered to the CCIUI. This may be conducted one-on-one with a designated CCI or may be accomplished in conjunction with GFAM-124 with the CCIUI administering the oral exam to a CCUI. The CCUI must be a designated CRM Facilitator prior to being designated a CCI.

IUT-5001   2.5   *   B,R   (N*) E   A   1 C-20G

Goal. Introduce CCIUI techniques.

Requirements. CCIUI shall act in an Instructor capacity while being observed and instructed by a designated CCI.

Performance Standard. Demonstrate mastery of all UC-20G procedures and systems and perform capable instruction to CCUI.

Prerequisite. ACAD-5000

IUT-5002   2.5   *   B,R   (N*) E   A   1 C-20G

Goal. Review CCIUI techniques.

Requirements. CCIUI shall act in an Instructor capacity while being observed and instructed by a designated CCI.

Performance Standard. Demonstrate mastery of all UC-20G procedures and systems and perform capable instruction to CCUI.

Prerequisite. ACAD-5001

3.16 REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) (6000 PHASE)

3.17 REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) STAGES

UC-20G CORE STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
ACAD	3.18.1	3-23
NTPS	3.18.2	3-23
EP	3.18.3	3-24
CC DESG	3.18.4	3-25
FCF	3.18.5	3-25
RECR	3.18.6	3-26

3.17.1 ACADEMICS (ACAD)

3.17.1.1 Purpose. Provide yearly NATOPS academic requirements to maintain currency in the aircraft.

ACAD-6000   3.0   365   B,R,M   E

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

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

ACAD-6001   1.0   365   B,R,M   E

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

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

Prerequisite. ACAD-6000

ACAD-6002   1.0   365   B,R,M   E

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

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

Prerequisite. ACAD-6000, ACAD-6001 within 60 days preceding this event.

ACAD-6005   3.0   365   B,R,M   E

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

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

3.17.2 NATOPS EVALUATIONS (NTPS)

3.17.2.1 Purpose. Provide required annual NATOPS and CRM flights to maintain currency.

3.17.2.2 Crew Requirements. Crew requirements are delineated on each flight to ensure proper crew composition.

NTPS-6100   3.0   365   B,R,M   (N*)   E   A/S   1 C20-G

Goal. Complete Annual NATOPS evaluation.

Requirement. Perform annual NATOPS evaluation per OPNAVINST 3710 and all applicable local directives.

Performance Standard. Be able to safely operate the aircraft IAW the UC-20G NATOPS and unit SOPs under normal and emergency situations to the level of positional designation within the aircraft.

Prerequisite. ACAD-6000, ACAD-6001, ACAD-6002 within 60 days preceding this event.

Crew Requirements. TAC, CP, CCUI, CCANI/NI

NTPS-6101   3.0   365   B,R,M   (N*)   E   A/S   1 C20-G

Goal. Complete Annual CRM flight evaluation.

Requirement. Perform initial/annual CRM flight evaluation per applicable directives.

Performance Standard. Demonstrate knowledge of all aspects of CRM with respect to duties performed as CC.

Prerequisite. ACAD-6005

Crew Requirements. TAC and CP (one must be CRMF) and CCUI

3.17.3 EP

3.17.3.1 Purpose. Maintain monthly and quarterly emergency procedure training.

3.17.3.2 General. Emergency procedure training consists of a monthly EP exam and a quarterly EP simulator. In the event the simulator is unavailable, the EP review may be conducted in the cockpit either pre or post flight as a static event.

3.17.3.3 Crew Requirements. Emergency Procedure review events may be instructed by any qualified aircrew and should be accomplished with two pilots and a crew chief.

EP-6300   1.0   30   B,R,M   E

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam per NAVMC 3500.14

EP-6301   1.0   90   B,R,M   (N*)   E   S/A   1 C-20G

Goal. Emergency Procedure Review.

Requirement. This event will review UC-20G emergency procedures and fulfills the requirement of quarterly EP simulator training per NAVMC 3500.14. This event can be accomplished as a combined event in the simulator or in the actual aircraft while airborne or sitting on the deck.

Performance Standard. Comply with UC-20G NFM Emergency Procedures.

3.17.4 FCF

3.17.4.1 Purpose. To designate the CCUI as a CC capable of conducting FCFs.

FCF-6601   2.5   *   B,R   D   A   1 C-20G

Goal. Familiarize the CCUI with the FCF checklist and procedures. Conduct training for designation as a Functional Check CC. At the completion of this event and all other prerequisites are met the CCUI will be designated an FCP.

Requirement. Conduct FCF training with a previously designated FCCC. Brief: flight procedures/conduct, FCF requirements, FCF procedures. Conduct: QA/Maintenance brief, ADB review, exterior/interior inspection, engine start, taxi, takeoff, climb, level at altitude, FCF checks, enroute descent, penetration, landing, postflight, debrief QA/Maintenance, sign off FCF card and required maintenance paperwork.

Performance Standard. Satisfactorily execute procedures per the UC-20 Operations Manual, OPNAVINST 3710.7(series), and OPNAVINST 4790.2(series).

Prerequisite. Designated Crew Chief

Crew Requirements. PUI, BIP, and CC.
3.17.5 RECR. To provide required recurrency training to maintain Squadron recurrency requirements for the UC-20G. This training will be conducted at an approved CACT facility.

RECR-6700   16.0   365   B,R,M   E   CACT GROUND SCHOOL

Goal. Complete Recurrent Ground School.

Requirement. Per CACT approved syllabus.

Performance Standard. Per CACT approved syllabus.

RECR-6701-6703   4.0   365   B,R,M   (N*)   E   S   1 C-20G

Goal. Complete Recurrent Flight Phase.

Requirement. Per CACT approved syllabus.

Performance Standard. Per CACT approved syllabus.

3.18 UC-20G CREW CHIEF (CC) T&R SYLLABUS MATRIX

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				MAINTAIN	ACADEMIC		SIMULATOR		FLIGHTS		COND	TYPE	A/C or SIM #	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
				B	S	C	R		#	TIME	#	TIME	#	TIME								
1000 ACAD	ACAD	CACT Ground School	1000	X					1	80.0						G		*			X	1000
		ACAD TOTAL							1	80.0												
1000 GFAM	GFAM	Intro to C-20G	1101	X			X				1	2.0			(N*)	A	1	*	1000			1101
	GFAM	Intro to APU	1102	X							1	2.0			(N*)	A	1	*	1101			1102
	GFAM	Intro to AC Electrical	1103	X							1	2.0			(N*)	A	1	*	1102			1103
	GFAM	Intro to DC Electrical	1104	X							1	2.0			(N*)	A	1	*	1103			1104
	GFAM	Intro to SEPS electrical	1105	X							1	2.0			(N*)	A	1	*	1104			1105
	GFAM	Review electrical system	1106	X							1	2.0			(N*)	A	1	*	1105			1106
	GFAM	Intro to Flt and Aux HYD	1107	X							1	2.0			(N*)	A	1	*	1106			1107
	GFAM	Intro to Cmb and Util HYD	1108	X							1	2.0			(N*)	A	1	*	1107			1108
	GFAM	Review HYD System	1109	X							1	2.0			(N*)	A	1	*	1108			1109
	GFAM	Intro to Flight controls	1110	X							1	2.0			(N*)	A	1	*	1109			1110
	GFAM	Intro to landing gear	1111	X							1	2.0			(N*)	A	1	*	1110			1111
	GFAM	Intro to fuel system	1112	X							1	2.0			(N*)	A	1	*	1101			1112
	GFAM	Intro to water and waste system	1113	X							1	2.0			(N*)	A	1	*	1101			1113
	GFAM	Intro to pneumatic system	1114	X							1	2.0			(N*)	A	1	*	1101			1114
	GFAM	Intro to anti-ice and pitot-static system	1115	X							1	2.0			(N*)	A	1	*	1114			1115
	GFAM	Intro to air conditioning system	1116	X							1	2.0			(N*)	A	1	*	1115			1116
	GFAM	Intro to press and oxy system	1117	X							1	2.0			(N*)	A	1	*	1116			1117
	GFAM	Intro to compressor and turbine	1118	X							1	2.0			(N*)	A	1	*	1101			1118
	GFAM	Intro to engine fuel system	1119	X							1	2.0			(N*)	A	1	*	1118			1119
	GFAM	Intro to engine oil system	1120	X							1	2.0			(N*)	A	1	*	1119			1120
	GFAM	Review engine	1121	X							1	2.0			(N*)	A	1	*	1120			1121
	GFAM	Intro to fire system	1122	X							1	2.0			(N*)	A	1	*	1121			1122
	GFAM	Intro to FMS	1123	X							1	2.0			(N*)	A	1	*	1101			1123
	GFAM	Intro to cabin lights and doors	1124	X							1	2.0			(N*)	A	1	*	1101			1124
	GFAM	Progress check	1125	X			X				1	2.0			(N*)	A	1	*	1101 - 1124		X	1125

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				MAINTAIN	ACADEMIC		SIMULATOR		FLIGHTS		COND	TYPE	A/C or SIM #	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
				B	S	C	R		#	TIME	#	TIME	#	TIME								
	GFAM	Tow tractor operator GSE	1126	X			X				1	2.0			(N*)	A	1	*	None			1126
	GFAM	Oxygen cart GSE	1127	X			X				1	2.0			(N*)	A	1	*	None			1127
	GFAM	Nitrogen GSE	1128	X			X				1	2.0			(N*)	A	1	*	None			1128
	GFAM	AC and DC power GSE	1129	X			X				1	2.0			(N*)	A	1	*	None			1129
	GFAM	External air cart	1130	X			X				1	2.0			(N*)	A	1	*	None			1130
		GFAM TOTAL									30	60.0										
	FAM	Review CC duties	1201	X			X						1	3.0	(N*)	A	1	*	1101			1201
	FAM	Review APU Operation	1202	X			X						1	3.0	(N*)	A	1	*	1102			1202
	FAM	Review electrical system	1203	X			X						1	3.0	(N*)	A	1	*	1106			1203
	FAM	Review hydraulic system	1204	X			X						1	3.0	(N*)	A	1	*	1109			1204
	FAM	Review flight control system	1205	X			X						1	3.0	(N*)	A	1	*	1110			1205
	FAM	Review landing gear system	1206	X			X						1	3.0	(N*)	A	1	*	1111			1206
	FAM	Review fuel system	1207	X			X						1	3.0	(N*)	A	1	*	1112			1207
	FAM	Review potable waster and waste disposal	1208	X			X						1	3.0	(N*)	A	1	*	1113			1208
	FAM	Review pneumatic, anti-ice, and pitot-static systems	1209	X			X						1	3.0	(N*)	A	1	*	1115			1209
1000 FAM	FAM	Review air conditioning and pressurization systems	1210	X			X						1	3.0	(N*)	A	1	*	1117			1210
	FAM	Review TAY 611-8 powerplant and related systems	1211	X			X						1	3.0	(N*)	A	1	*	1121			1211
	FAM	Review APU, engine fire warning, and extinguishing systems	1212	X			X						1	3.0	(N*)	A	1	*	1122			1212
	FAM	Review FMS and related FGC systems	1213	X			X						1	3.0	(N*)	A	1	*	1123			1213
	FAM	Review aircraft lighting, galley, door and stairway ops. LM duties	1214	X			X						1	3.0	(N*)	A	1	*	1124			1214
	FAM	Stage Check	1215	X			X						1	3.0	(N*)	A	1	*	1101-1130, 1201-1214		X	1215
		FAM TOTAL											15	45.0								
3000 OSA	OSA	Aircraft Proficiency	3101	X			X	X					1	4.0	(N*)	A/S	1	60	6100			3101
OSA	OSA	Operational Aircraft	3102	X			X	X					1	4.0	(N*)	A/S	1	60	6100	3101		3102

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				MAINTAIN	ACADEMIC		SIMULATOR		FLIGHTS		COND	TYPE	A/C or SIM #	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
				B	S	C	R		#	TIME	#	TIME	#	TIME								
		Support																				
		OSA TOTAL											2	8.0								
5000 ACAD	ACAD	IUT Ground School	5000	X			X		1	5.0						G		*	6504		X	5000
		ACAD TOTAL							1	5.0												
5000 IUT	IUT	Instructional Techniques	5001	X			X						1	2.5	(N*)	A	1	*	5000		X	5001
	IUT	Instructional Technique Review	5002	X			X						1	2.5	(N*)	A	1	*	5001		X	5002
		IUT TOTAL											2	5.0								
6000 ACAD	ACAD	NATOPS Open Book Exam	6000	X			X	X	1	3.0						G		365			X	6000
	ACAD	NATOPS Closed Book Exam	6001	X			X	X	1	1.0						G		365	6000		X	6001
	ACAD	NATOPS Oral Exam	6002	X			X	X	1	1.0						G		365	6000, 6001		X	6002
	ACAD	CRM Ground	6005	X			X	X	1	3.0						G		365			X	6005
		ACAD TOTAL							4	8.0												
6000 NTPS	NTPS	NATOPS Evaluation	6100	X			X	X					1	3.0	(N*)	A/S	1	365	6000, 6001, 6002		X	6100
	NTPS	CRM Flight	6101	X			X	X					1	3.0	(N*)	A/S	1	365	6005		X	6101
		NTPS TOTAL											2	6.0								
6000 EP	EP	Monthly EP Exam	6300	X			X	X	1	1.0						G		30			X	6300
	EP	90 Day EP Practical Review	6301	X			X	X	1	1.0						A/S	1	90			X	6301
		EP TOTAL							2	2.0												
6000 FCF	FCF	FCF Practice/Designation	6601	X			X						1	2.5	D	A	1	*	DESG CC		X	6601
		FCF TOTAL											1	2.5								
6000 RECR	RECR	Recurrent Ground School (CACT)	6700	X			X	X	1	16.0						G		365			X	6700
	RECR	Recurrent Sim 1 (CACT)	6701	X			X	X			1	4.0			(N*)	S	1	365	6700			6701
	RECR	Recurrent Sim 2 (CACT)	6702	X			X	X			1	4.0			(N*)	S	1	365	6701			6702
	RECR	Recurrent Sim 3 (CACT)	6703	X			X	X			1	4.0			(N*)	S	1	365	6702			6703
		RECR TOTAL							1	16.0	3	12.0										
		TOTALS							8	111.0	33	72.0	22	66.5								

CHAPTER 4

UC-20G LOAD MASTER
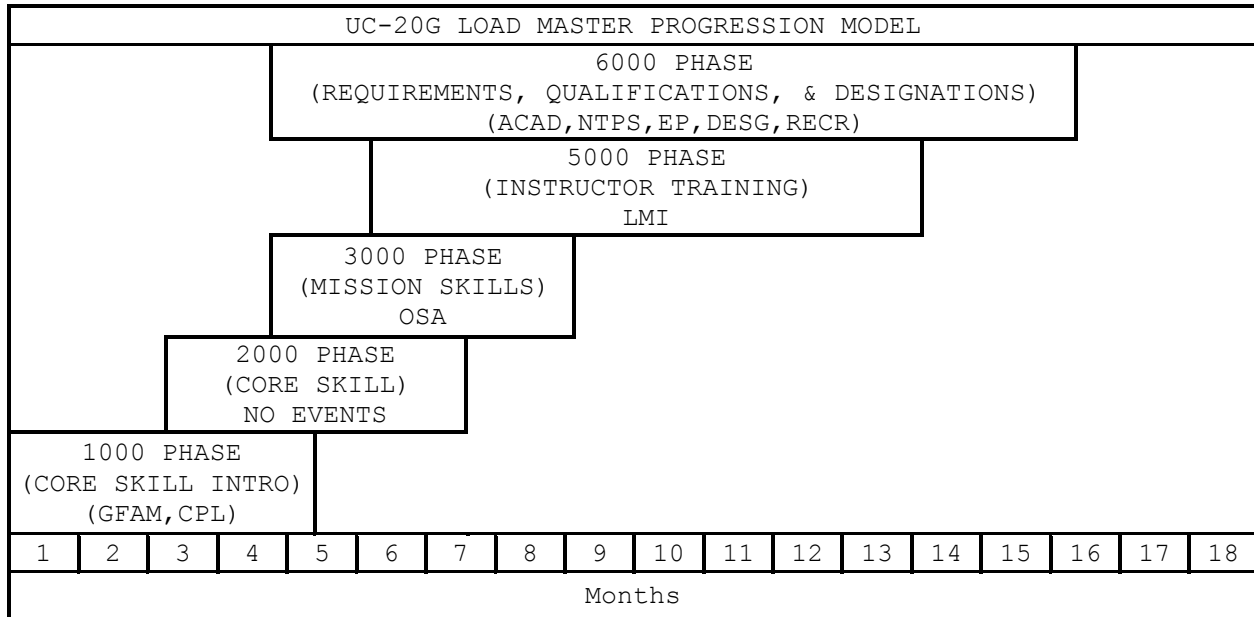
CHAPTER 4

UC-20G LOAD MASTER

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

3.1 <u>TRAINING PROGRESSION MODEL</u>

Represents the recommended training progression for the UC-20G Load Master.

Represents minimum-to-maximum time-to-train by Phase.

Units should use the model as a guide to generate individual training plans.

UC-20G LOAD MASTER PROGRESSION MODEL																	
				6000 PHASE (REQUIREMENTS, QUALIFICATIONS, & DESIGNATIONS) (ACAD,NTPS,EP,DESG,RECR)													
					5000 PHASE (INSTRUCTOR TRAINING) LMI											
			3000 PHASE (MISSION SKILLS) OSA														
		2000 PHASE (CORE SKILL) NO EVENTS															
1000 PHASE (CORE SKILL INTRO) (GFAM,CPL)																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Months																	

3.2 <u>PROGRAMS OF INSTRUCTION (POI)</u>

3.2.1 <u>General</u>. Represents the average time-to-train by Phase. The time required to train a UC-20G Load Master to completion of the Core Plus Phase is based off of flight hour requirements that are published in the UC-20G NATOPS manual. Assignment to a specific POI is determined by previous Aircrew experience. Load Master Under Instruction (LMUI) without prior Naval Load Master experience shall be assigned to the Basic (B). LMI who were previously designated Naval Load Master shall be assigned to the Basic (B) POI and may be designated as UC-20G LM upon successful completion of the Basic (B) POI. Those Load Masters who were previously designated a UC-20G LM and are returning to a VMR shall be assigned to the Refresher (R) POI. When a crewmember completes a stage of training, that crewmember needs only to maintain proficiency in the (M) coded events for that stage to remain proficient.

3.2.2 <u>Basic (B) POI</u>. Basic (B) Load Master shall fly the entire syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1	Check-In	VMR Det.
2-3	Load Master Course	CFLSW, Fort Worth JRB
4-16	Core Skill Introduction Training	VMR Det.

3.2.3 <u>Refresher (R) POI</u>. Refresher Load Master shall fly those events annotated with a R. Commanding officers/OICs will review the qualifications, previous experience, currency, and demonstrated ability of Refresher Load Master with a view towards combining required flights.

WEEKS	COURSE	PERFORMING ACTIVITY
1	Check-In	VMR Det.
2-3	Load Master Course	CFLSW, Fort Worth JRB
4-8	Core Skill Introduction Training	VMR Det.

3.3 <u>PROFICIENCY & CURRENCY</u>

3.3.1 <u>Proficiency</u>. Proficiency is a measure of achievement of a specific skill. Refly factors establish the maximum time between demonstration of those particular skills. To regain proficiency, an individual shall complete the delinquent events with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with an instructor from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, the instructor shall regain proficiency with another aircraft commander or as designated by the commanding officer.

3.3.2 <u>Currency</u>. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in Chapter 3 of the Aviation T&R Program Manual.

3.4 <u>INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS</u>

3.4.1 Management of individual CSP serves as the foundation for developing proficiency requirements.

3.4.2 Individual CSP is a "Yes/No" status assigned to an individual by Core Skill. When an individual attains and maintains CSP in a Core Skill, the individual counts towards CMTS Unit CSP requirements for that Core Skill.

3.4.3 Proficiency is attained by individual Core Skill where the training events for each skill are determined by POI assignment.

3.4.4 Once proficiency has been attained by Core Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the maintain table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Core Skill.

Note
Individuals may be attaining proficiency in some Core Skills while maintaining proficiency in other Core Skills.

3.4.5 Once proficiency has been attained, should one lose proficiency in an event in the "Maintain POI" column, proficiency can be re-attained by demonstrating proficiency in the delinquent event. Should an individual lose

proficiency in all events in the "Maintain POI" column by Core Skill, the individual will be assigned to the Refresher POI for that Skill. To regain proficiency for that Core Skill the individual must demonstrate proficiency in all R-coded events for that Skill.

3.5 <u>INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS</u>

3.5.1 Management of individual MSP serves as the foundation for developing proficiency requirements in DRRS-MC.

3.5.2 Individual MSP is a "Yes/No" status assigned to an individual by Mission Skill. When an individual attains and maintains MSP in a Mission Skill, the individual counts towards CMMR-RR Unit MSP requirements for that Mission Skill.

3.5.3 Proficiency is attained by individual Mission Skill where the training events for each skill are determined by POI assignment.

3.5.4 Once proficiency has been attained by Mission Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Mission Skill.

Note
Individuals may be attaining proficiency in some Mission Skills
while maintaining proficiency in other Mission Skills.

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

SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY		MAINTAIN POI
			BASIC POI	REFRESHER POI	
OSA	OSA	OPERATIONAL SUPPORT AIRLIFT	3101	3101R	3101R
			3102	3102R	3102R

UC-20G LOAD MASTER ATTAIN AND MAINTAIN MISSION SKILL PROFICIENCY (3000 Phase)

NOTE
Specific Maintain events are selected by community SMEs to update corresponding
skills in the Attain table. Maintaining proficiency in these select events will
ensure the individual will never go delinquent in that corresponding skill in the
Attain table.

3.6 <u>INDIVIDUAL CORE PLUS SKILL PROFICIENCY REQUIREMENTS</u>

3.6.1 Management of individual CPSP serves as the foundation for developing proficiency requirements.

3.6.2 Individual CPSP is a "Yes/No" status assigned to an individual by Core Plus Skill. When an individual attains and maintains CPSP in a Core Plus Skill, the individual counts towards CMMR/CMTS Unit CPSP requirements for that Core Plus Skill.

3.6.3 Proficiency is attained by individual Core Plus Skill where the training events for each skill are determined by POI assignment.

3.6.4 Once proficiency has been attained by Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain table and in the Maintain POI column of the

Attain and Maintain Table. An individual maintains proficiency by individual Core Plus Skill.

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

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

3.7 <u>REQUIREMENTS, QUALIFICATIONS, AND DESIGNATION TABLES</u>. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all 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 Aircrew Performance Records (APR) and NATOPS jackets. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events

INDIVIDUAL DESIGNATION REQUIREMENTS UC-20G LOAD MASTER	
Designation	**Initial Event Designation Requirements**
LM	6100R
LMI	5004R
Qualification	**Initial Event Qualification Requirements**
NATOPS	6000,6001R,6002R,6101R

3.8 <u>SYLLABUS NOTES</u>

3.8.1 All events shall begin with a comprehensive brief with emphasis on administrative procedures, CRM, mission performance standards and aircrew expectations.

3.8.2 All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance utilizing all evaluation techniques available.

3.8.3 An ATF is required for any initial event completed by a Basic or Refresher Transport Aircrewman, or as recommended by the squadron Standardization Board. If the commanding officer has waived/deferred a syllabus sortie, the squadron training officer shall place a waiver/deferral letter in section 3 of the APR.

3.8.4 <u>Event Conditions</u>. Refer to the following table for required event conditions.

Code	Environmental Condition
D	Shall be flown or conducted during day
N	Shall be flown or conducted at night (using available night vision devices or flown unaided) at least 30 minutes after official sunset.
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided
D/NS	Shall be flown both day and night conditions, unless flown in the aircraft, in which case the event may be flown during day or night conditions

NS	Shall be flown or conducted at night using available night vision devices at least 30 minutes after official sunset
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used
N*	Event Shall be flown or conducted at night unaided
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided

3.9 CORE SKILL INTRODUCTION (1000 PHASE)

3.9.1 General. The Core Skill Introduction Phase is designed to familiarize the CCUI with all aspects of C-20G systems and operations and designate a C-20G Crew Chief upon successful completion. This stage is designed to ensure a high level of knowledge is attained through study and instruction while utilizing the aircraft as a training aid. In order to be successful, the CCUI must arrive at each event with an in-depth working knowledge of the systems and procedures covered by the event. If the CCUI does not have a satisfactory level of knowledge at the commencement of the event, the event shall be terminated and appropriate action taken.

3.10 CORE INTRODUCTION STAGES

UC-20G CORE INTRODUCTION STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
GFAM	3.10.1	3-7
CPL	3.10.2	3-9

3.10.1 GFAM

3.10.2.1 Purpose. To build on the LMUI's academic training and to introduce LM responsibilities on the UC-20G.

3.10.2.2 General. The events in this stage are delineated as GFAM. GFAM events will normally be conducted as ground evolutions using the aircraft and support equipment as training tools. However, each event in this stage may be conducted in conjunction with a flight event provided a qualified and proficient Loadmaster Instructor is present. The first 3 events of this stage must be completed in order. The remaining events may be completed out of order, if necessary. This stage must be completed in its entirety prior to commencing the Cargo and Passenger Loading stage.

3.10.2.3 Crew Requirements. All events conducted as part of a line mission require a TAC, CP, CC, LMI, and LMUI. If the event is not in conjunction with a flight event, only the LMI and LMUI are required.

GFAM-1101   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce aircraft and loadmaster duties.

Requirement. Introduce overview of loadmaster duties and conduct initial walk-through of aircraft. Introduce APU procedures, pre-flight preparation duties and pre-flight inspection. Introduce emergency procedures to include fuselage fire, smoke and fume elimination, APU fire.

Performance Standard. Demonstrate sound knowledge of both normal and abnormal procedures.

GFAM-1102   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce aircraft and loadmaster duties.

Requirement. Review overview of loadmaster pre-flight duties and APU
procedures. Introduce thru-flight inspection, post-flight inspection, C-20G
aircraft rigs (A, B, C, D, E, F, G, J, K, M) and instructor-selected
emergency procedures to include door warning in flight and rapid
decompression.

Performance Standard. Demonstrate sound knowledge of covered material and
both normal and abnormal procedures.

Prerequisite. GFAM-1101

GFAM-1103   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce doors and entrances.

Requirement. Review loadmaster duties and all required inspections.
Introduce doors and entrances to include forward entrance door, operation of
forward air stair with and without aircraft power, emergency exits, over-wing
exits, and escape ropes. Introduce instructor-selected emergencies to
include crash landing, ditch on takeoff, abnormal landing, ditching.

Performance Standard. Demonstrate sound knowledge of doors and entrances.

Prerequisite. GFAM-1102

GFAM-1104   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce Survival Equipment.

Requirement. Review loadmaster duties and all required inspections.
Introduce survival equipment to include life vests, life rafts, survival
kits, first aid kits, blankets, crash axe, and portable fire extinguishers.

Performance Standard. Demonstrate sound knowledge of C-20G survival
equipment.

Prerequisite. GFAM-1103

GFAM-1105   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce oxygen equipment.

Requirement. Introduce oxygen equipment to include passenger and cabin crew
oxygen system, first aid oxygen and masks, portable oxygen cylinders, oxygen
masks (main cabin).

Performance Standard. Demonstrate sound knowledge of C-20G oxygen equipment.

Prerequisite. GFAM-1104

GFAM-1106   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce lighting and public address (PA) system.

Requirement. Introduce aircraft lighting to include normal, emergency, and evacuation lighting. Introduce the public address system to include priority and call lights.

Performance Standard. Demonstrate sound knowledge of C-20G lighting and PA system.

Prerequisite. GFAM-1105

GFAM-1107   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce lavatory system and galley.

Requirement. Introduce the lavatory system to include potable water system, filters and shutoff, servicing panel, wastewater tanks, toilet servicing, and cold weather servicing. Introduce aircraft galley and equipment to include ovens, hot cups, cold storage ice drawer, and the galley electrical control panel and outlets.

Performance Standard. Demonstrate sound knowledge of C-20G lavatory system and galley.

Prerequisite. GFAM-1106

GFAM-1108   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce Defense Travel System.

Requirement. Introduce the defense travel system to include creation of group travel authorizations, orders, vouchers, etc.

Performance Standard. Demonstrate sound knowledge of DTS.

Prerequisite. GFAM-1107

GFAM-1109   1.5   *   B   (N*)   A   1   C-20G

Goal. Introduce cargo door.

Requirement. Introduce cargo door operations and limitations.

Performance Standard. Demonstrate sound knowledge of C-20G cargo door system.

Prerequisite. GFAM-1108

GFAM-1110   1.5   *   B,R   (N*)   E   A   1   C-20G

Goal. Stage Check.

Requirement. Review all aspects of the C-20G to include systems, normal, and abnormal procedures. Instructor-selected emergencies to include emergency egress of aircrew and passengers.

Performance Standard. Demonstrate mastery of loadmaster-specific systems and procedures.

Prerequisite. GFAM 1109

3.10.2 GPL

3.10.3.1 Purpose. Expose LMUI to mission-specific issues including weight
and balance, cargo loading, and passenger loading.

3.10.2.2 General. Events may be conducted in conjunction with line missions
or dedicated training missions. Multiple events may be conducted on one
sortie, provided the student is progressing adequately. Sortie time allotted
for each event may be shortened at the discretion of the instructor. All
events in the Ground Familiarization stage must be completed prior to
commencing the Cargo and Passenger Loading stage.

3.10.3.3 Crew Requirements. In addition to a TAC, CP, and CC, a qualified
and proficient Loadmaster is required for these events in order to supervise
the LMUI and meet the minimum crew requirements.

CPL-1201   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce LMUI to aircraft and loadmaster duties.

Requirement. Review loadmaster pre and post-flight duties, APU procedures,
and aircraft rigs. Introduce loadmaster brief techniques and procedures to
include departure, thru-briefs and seat belt demonstration.

Performance Standard. Demonstrate sound knowledge of covered material and
both normal and abnormal procedures.

Prerequisite. GFAM-1110

CPL-1202   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce LMUI to aircraft and loadmaster duties.

Requirement. Review loadmaster pre- and post-flight duties, APU procedures,
aircraft rigs, departure brief, thru-brief, seat belt demonstration, and
instructor- selected emergencies. Introduce approach brief, over-water
brief, landing brief, and abnormal landing brief.

Performance Standard. Demonstrate sound knowledge of covered material and
both normal and abnormal procedures.

Prerequisite. GFAM-1110

CPL-1203   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce LMUI to aircraft and loadmaster duties.

Requirement. Review loadmaster pre- and post-flight duties, APU procedures,
aircraft rigs, and instructor- selected briefs and emergencies. Introduce
VIP brief and procedures.

Performance Standard. Demonstrate sound knowledge of covered material and
both normal and abnormal procedures.

Prerequisite. GFAM-1110

CPL-1204   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce mission planning.

Requirement. Introduce mission planning concepts and procedures to include load planning, cargo inspection, cargo loading and unloading, cargo loading and offloading, passenger handling, and air terminal operations.

Performance Standard. Demonstrate sound knowledge of covered material.

Prerequisite. GFAM 1110

CPL-1205   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce mission planning.

Requirement. Introduce mission planning concepts and procedures to include Form F, Logistics Flight Record, NAVFLIR, baggage handling, crew coordination.

Performance Standard. Demonstrate sound knowledge of covered material.

Prerequisite. GFAM 1110

CPL-1206   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce mission planning.

Requirement. Introduce mission planning concepts and procedures to include customs, agriculture, mail handling, classified material, arms and ammunition, hazardous cargo, oversized cargo, piercing or penetrating cargo, compressible and incompressible cargo, shoring, restraint requirements, and live animal cargo.

Performance Standard. Demonstrate sound knowledge of covered material.

Prerequisite. GFAM 1110

CPL-1207   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce passenger handling responsibilities.

Requirement. Introduce passenger handling to include identification requirements, proper attire, **VIP**, dependents, and passenger baggage.

Performance Standard. Demonstrate sound knowledge of covered material and both normal and abnormal procedures.

Prerequisite. GFAM 1110

CPL-1208   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce Weight and Balance (W&B).

Requirement. Introduce W&B terminology and publications to include the NAVAIR 01-1B-40, 01-1B-50, 01-C20AAA-1.

Performance Standard. Demonstrate sound knowledge of covered material and both normal and abnormal procedures.

Prerequisite. GFAM 1110

CPL-1209   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce W&B.

Requirement. Review W&B terminology and applicable publications. Introduce load charts and forms to include DD-365, DD-365-1, DD-365-2, DD365-3, DD365-4, chart E, and Form F.

Performance Standard. Demonstrate sound knowledge of covered material.

Prerequisite. GFAM-1110.

CPL-1210   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce cargo loading equipment.

Requirement. Introduce cargo loading equipment to include forklift, K-loader, high lift truck, roller tongs, pallets, and nets. Conduct loading exercises with each piece of equipment until familiar.

Performance Standard. Demonstrate sound knowledge of equipment used in cargo loading.

Prerequisite. GFAM-1110.

CPL-1211   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce cargo loading systems.

Requirement. Introduce cargo loading systems to include rigid end restraint, side guide rails, roller conveyor assemblies, ball transfer conveyors, retractable dual-end restraints, and doorsill conveyor assemblies. Review cargo-loading equipment.

Performance Standard. Demonstrate sound knowledge of equipment used in cargo systems.

Prerequisite. GFAM-1110.

CPL-1212   3.0   *   B   (N*)   A   1   C-20G

Goal. Introduce cargo handling.

Requirement. Introduce cargo handling to include oversized cargo, piercing or penetrating cargo, shoring, dunnage, alternate restraint, restraint requirements, and live animal handling. Review cargo-loading equipment and cargo-loading systems.

Performance Standard. Demonstrate sound knowledge of cargo handling
concepts.

Prerequisite. GFAM-1110.

CPL-1213   3.0   *   B,R   (N*)   E   A   1   C-20G

Goal. Stage Check.

Requirement. Evaluate LMUI progress. Review all aspects of cargo and
passenger loading.

Performance Standard. Demonstrate mastery of cargo and passenger handling
concepts.

Prerequisite. CPL-1201 thru CPL-1212.

3.11 CORE PHASE (2000 PHASE). There are no Core Skill Phase events in the
Crew Chief syllabus.

3.12 MISSION PHASE (3000 PHASE)

3.12.1 Purpose. This stage of training is designed to fulfill the
requirement set in MCT 1.3.3.3.1, Conduct Aviation Support Operations.

3.12.2 Crew Requirement. TAC, CP, CC

3.13 MISSION STAGES

C-20G MISSION STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
OSA	3.14.1	3-20

3.13.1 Operational Support Airlift (OSA)

3.13.1.1 Purpose. This stage of training is designed to fulfill the
requirement set in MCT 1.3.3.3.1, Conduct Aviation Support Operations.

3.13.1.2 Crew Requirement. TAC, CP, CC

OSA-3101   4.0   60   B,R,M   (N*)   A/S   1   C-20G

Goal. Aircraft proficiency. Retain and maintain proficiency with all
aspects of aircraft operation. Perform all standard loadmaster duties during
a line mission under the supervision of a current and proficient loadmaster.

Requirement. Discuss selected systems. Demonstrate competence in all areas
of C-20G LM responsibilities.

Performance Standard. Perform all loadmaster duties in accordance with
applicable directives.

Prerequisite. NTPS-6100

Crew Requirement. TAC, CP, CC, LM

OSA-3102   4.0   60   B,R,M   (N*)   A/S   1   C-20G

Goal. Conduct a line mission under actual or simulated tasking from Higher Headquarters.

Requirement. Conduct a line mission.

Performance Standard. Conduct a line mission involving (but not limited to) overwater flight, international airspace, or takeoffs and landings away from home station and outside of the local flying area. A line mission should involve some level of DV, general passenger, or cargo carrying operations. If CACT is being used to update proficiency, the mission planning phase must include the same level of preparation and products as an event flown in the actual aircraft.

Prerequisite. NTPS-6100

Crew Requirement. TAC, CP, CC, LM

3.14 INSTRUCTOR TRAINING PHASE (5000 PHASE)

3.14.1 General. The purpose of this phase of training is to train qualified Crew Chiefs to instruct various levels of instruction.

3.15 INSTRUCTOR TRAINING STAGES

C-20G INSTRUCTOR TRAINING STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
IUT	3.16.1	3-14

3.15.1 INSTRUCTOR UNDER TRAINING (IUT)

3.15.2.1 Purpose. Earn designation as Load Master Instructor (LMI).

3.15.2.2 General. To be eligible for this stage, the LM must be nominated by the standardization board and approved by the commanding officer, and should have flown 400 hours acting as a loadmaster in the C-20G. Upon successful completion of IUT-5002, LM may be designated a LMI by the Commanding Officer.

3.15.2.3 Crew Requirements. TAC, CP, CCI, LMIUI.

3.15.2.4 Ground/Academic Training. The LMIUI must be a designated CRM Facilitator prior to being designated a LMI.

IUT-5001   3.0   *   B,R   (N*)   E   A   1   C-20G

Goal. Introduce LMIUI techniques.

Requirements. Monitor a designated LMI instructing a LMUI in all facets of aircraft operations and loadmaster duties. Discuss specific instructor techniques. Discuss all publications and duties from an instructing standpoint.

Performance Standard. Monitor LMI-led mission.

Prerequisite. DESG-6504

IUT-5002   3.0   *   B,R   (N*) E   A   1   C-20G

Goal. Evaluate LMIUI ground instruction.

Requirement. Evaluate LMIUI teaching any ground familiarization event (GFAM 1001-1010) to a LMUI.

Performance Standard. LMIUI effectively teaches the material.

Prerequisite. IUT-5001

IUT-5003   10.0   *   B,R   (N*) E   A   1   C-20G

Goal. Conduct a mission acting as LMI instructing a LMUI.

Requirement. Lead an instructional mission that covers all facets of aircraft operations and loadmaster duties. Emphasize academic knowledge and instructional techniques.

Performance Standard. Conduct a safe and efficient mission while instructing a LMUI.

Prerequisite. IUT-5002.

IUT-5004   10.0   *   B,R   (N*) E   A   1   C-20G

Goal. Instructor Check.

Requirement. Lead an instructional mission that covers all facets of aircraft operations and loadmaster duties. Emphasize academic knowledge and instructional techniques.

Performance Standard. Demonstrate mastery of all knowledge and control of every situation while conducting an instructional mission.

Prerequisite. IUT-5003.

3.16 REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) (6000 PHASE)

3.17 REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) STAGES

UC-12F/M/W CORE STAGES		
STAGE	PARAGRAPH	PAGE NUMBER
ACAD	3.18.1	3-23
NTPS	3.18.2	3-23
EP	3.18.3	3-24

3.17.1 ACADEMICS (ACAD)

3.17.1.1 Purpose. Provide yearly NATOPS academic requirements to maintain currency in the aircraft.

ACAD-6000   3.0   365   B,R,M   E

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

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

ACAD-6001   1.0   365   B,R,M   E

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

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

Prerequisite. ACAD-6000

ACAD-6002   1.0   365   B,R,M   E

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

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

Prerequisite. ACAD-6000, ACAD-6001 within 60 days preceding this event.

ACAD-6005   3.0   365   B,R,M   E

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

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

3.17.2 NATOPS EVALUATIONS (NTPS)

3.17.2.1 Purpose. Provide required annual NATOPS and CRM flights to maintain currency.

3.17.2.2 Crew Requirements. Crew requirements are delineated on each flight to ensure proper crew composition.

NTPS-6100   3.0   365   B,R,M   (N*) E   S/A   1   C-20G

Goal. Complete Annual NATOPS evaluation.

Requirement. Perform annual NATOPS evaluation per OPNAVINST 3710 and all applicable local directives.

Performance Standard. Be able to safely operate the aircraft IAW the C-20G NATOPS and unit SOPs under normal and emergency situations to the level of positional designation within the aircraft.

Prerequisite. ACAD-6000, ACAD-6001, ACAD-6002 within 60 days preceding this event.

Crew Requirements. TAC, CP, LMUI, LMANI/NI

NTPS-6101   3.0   365   B,R,M   (N*) E   A/S   1   C-20G

Goal. Complete Annual CRM flight evaluation.

Requirement. Perform initial/annual CRM flight evaluation per applicable directives.

Performance Standard. Demonstrate knowledge of all aspects of CRM with respect to duties performed as LM.

Prerequisite. ACAD-6005

Crew Requirements. TAC and CP (one must be CRMF) and LMUI

3.17.3 EP

3.17.3.1 Purpose. Maintain monthly and quarterly emergency procedure training.

3.17.3.2 General. Emergency procedure training consists of a monthly EP exam and a quarterly EP simulator. In the event the simulator is unavailable, the EP review may be conducted in the cockpit either pre or post flight as a static event.

3.17.3.3 Crew Requirements. Emergency Procedure review events may be instructed by any qualified aircrew and should be accomplished with two pilots and a Load Master.

EP-6300   1.0   30   B,R,M   E

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam per NAVMC 3500.14

EP-6301   1.0   90   B,R,M   (N*)   E   S/A   1   C-20G

Goal. Emergency Procedure Review.

Requirement. This event will review C-20G emergency procedures and fulfills the requirement of quarterly EP simulator training per NAVMC 3500.14. This event can be accomplished as a combined event in the simulator or in the actual aircraft while airborne or sitting on the deck.

Performance Standard. Comply with C-20G NFM Emergency Procedures.

3.18 T&R SYLLABUS MATRIX

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				MAINTAIN	ACADEMIC		SIMULATOR		FLIGHTS		COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
				B	C	T	R		#	TIME	#	TIME	#	TIME								
1000 GFAM	GFAM	Intro aircraft and loadmaster duties	1101	X									1	1.5	(N*)	A	1	*	None			1101
	GFAM	Intro aircraft and loadmaster duties	1102	X									1	1.5	(N*)	A	1	*	1101			1102
	GFAM	Intro doors annd entrances	1103	X									1	1.5	(N*)	A	1	*	1102			1103
	GFAM	Intro survival equipment	1104	X									1	1.5	(N*)	A	1	*	1103			1104
	GFAM	Intro oxygen equipment	1105	X									1	1.5	(N*)	A	1	*	1104			1105
	GFAM	Intro lighting and public address (PA) system	1106	X									1	1.5	(N*)	A	1	*	1105			1106
	GFAM	Intro lavatory system and galley	1107	X									1	1.5	(N*)	A	1	*	1106			1107
	GFAM	Intro Defense Travel System	1108	X									1	1.5	(N*)	A	1	*	1107			1108
	GFAM	Intro cargo door	1109	X									1	1.5	(N*)	A	1	*	1108			1109
	GFAM	Stage Check	1110	X			X						1	1.5	(N*)	A	1	*	1109		X	1110
GFAM TOTAL													10	15.0								
1000 CPL	CPL	Intro LMUI to aircraft and loadmaster duties	1201	X									1	3.0	(N*)	A	1	*	1110			1201
	CPL	Intro LMUI to aircraft and loadmaster duties	1202	X									1	3.0	(N*)	A	1	*	1110			1202
	CPL	Intro LMUI to aircraft and loadmaster duties	1203	X									1	3.0	(N*)	A	1	*	1110			1203
	CPL	Intro mission planning	1204	X									1	3.0	(N*)	A	1	*	1110			1204

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				MAINTAIN	ACADEMIC		SIMULATOR		FLIGHTS		COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
				B	C	T	R		#	TIME	#	TIME	#	TIME								
	CPL	Intro mission planning	1205	X									1	3.0	(N*)	A	1	*	1110			1205
	CPL	Intro mission planning	1206	X									1	3.0	(N*)	A	1	*	1110			1206
	CPL	Intro passenger handling responsibilities	1207	X									1	3.0	(N*)	A	1	*	1110			1207
	CPL	Intro weight and balance (W&B)	1208	X									1	3.0	(N*)	A	1	*	1110			1208
	CPL	Intro weight and balance (W&B)	1209	X									1	3.0	(N*)	A	1	*	1110			1209
	CPL	Intro cargo loading equipment	1210	X									1	3.0	(N*)	A	1	*	1110			1210
	CPL	Intro cargo loading equipment	1211	X									1	3.0	(N*)	A	1	*	1110			1211
	CPL	Intro cargo handling	1212	X									1	3.0	(N*)	A	1	*	1110			1212
	CPL	Stage Check	1213	X			X						1	3.0	(N*)	A	1	*	1201-1212		X	1213
CPL TOTAL													13	39.0								
3000 OSA	OSA	Aircraft Proficiency	3101	X			X	X					1	4.0	(N*)	A	1	60	6100			3101
	OSA	Operational Aircraft Support	3102	X			X	X					1	4.0	(N*)	A/S	1	60	6100			3102
OSA TOTAL													2	8.0								
5000 IUT	IUT	Instructional Techniques	5001	X			X						1	3.0	(N*)	A	1	*	6100		X	5001
	IUT	Evaluate LMIUI ground instruction	5002	X			X						1	3.0	(N*)	A	1	*	5001		X	5002
	IUT	Conduct mission as LMI instructing LMUI	5003	X			X						1	10.0	(N*)	A	1	*	5002		X	5003
	IUT	Instructor Check	5004	X			X						1	10.0	(N*)	A	1	*	5003		X	5004

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				MAINTAIN	ACADEMIC		SIMULATOR		FLIGHTS		COND	TYPE	# A/C or SIM	REFLY	PREREQUISITE	CHAINING	EVAL	EVENT CONV
				B	C	T	R		#	TIME	#	TIME	#	TIME								
		IUT TOTAL											4	26.0								
6000 ACAD	ACAD	NATOPS Open Book Exam	6000	X			X	X	1	3.0						G		365			X	6000
	ACAD	NATOPS Closed Book Exam	6001	X			X	X	1	1.0						G		365	6000		X	6001
	ACAD	NATOPS Oral Exam	6002	X			X	X	1	1.0						G		365	6000, 6001		X	6002
	ACAD	CRM Ground	6005	X			X	X	1	3.0						G		365			X	6005
		ACAD TOTAL							4	8.0												
6000 NTPS	NTPS	NATOPS Evaluation	6100	X			X	X					1	3.0	(N*)	A/S	1	365	6000, 6001, 6002		X	6100
	NTPS	CRM Flight	6101	X			X	X					1	3.0	(N*)	A/S	1	365	6005		X	6101
		NTPS TOTAL											2	6.0								
6000 EP	EP	Monthly EP Exam	6300	X			X	X	1	1.0						G		30			X	6300
	EP	90 Day EP Practical Review	6301	X			X	X	1	1.0						A/S	1	90			X	6301
		EP TOTAL							2	2.0												
									6	10.0			31	94.0								