

NAVAL AIR TRAINING COMMAND



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CHIEF OF NAVAL AIR TRAINING



INTERMEDIATE MARITIME COMMAND AND CONTROL (MC2) NAVAL FLIGHT OFFICER SYSTEM (NFOTS) CURRICULUM

2023



DEPARTMENT OF THE NAVY
CHIEF OF NAVAL AIR TRAINING
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From: Chief of Naval Air Training

Subj: INTERMEDIATE MARITIME COMMAND AND CONTROL NAVAL FLIGHT
OFFICER SYSTEM CURRICULUM

1. Purpose. To publish the curriculum for training student Naval Flight Officers (NFO) in the Intermediate Maritime Command and Control (MC2) Naval Flight Officer System (NFOTS) phase of Naval Air Training Command (NATRACOM) flight training.
2. Cancellation. CNATRAINST 1542.180 will be cancelled when the last student enrolled completes the curriculum or is transitioned to the CNATRAINST 1542.180A.
3. Action. This curriculum is effective on receipt. No changes will be made without written authorization by the Chief of Naval Air Training (CNATRA).
4. Records Management. Records created as a result of this instruction, regardless of media and format, must be managed per Secretary of the Navy Manual 5210.1 of September 2019.
5. Review and Effective Date. Per this instruction, OPNAVINST 5215.17A, CNATRA N7 will review this instruction annually around the anniversary of its effective date to ensure applicability, currency, and consistency with Federal, DoD, SECNAV, and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will be in effect for 10 years, unless revised or cancelled in the interim, and will be reissued by the 10-year anniversary date if it is still required, unless it meets one of the exceptions in OPNAVINST 5215.17A paragraph 9. Otherwise, if the instruction is no longer required, it will be processed for cancellation as soon as the need for cancellation is known following the guidance in OPNAV Manual 5215.1 of May 2016.
6. Forms. The CNATRA Forms required by this instruction are automated in the Training/Learning Manager Management System (T/LMS) computer program. Additional CNATRA forms are available on the CNATRA Web site <https://www.cnatra.navy.mil/pubs/forms.htm>.


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Chief of Staff

Releasability and distribution:

This instruction is cleared for public release and is available electronically only via Chief of Naval Air Training Issuances Web site,
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COURSE DATA

1. Course Title. Intermediate Maritime Command and Control (MC2) Naval Flight Officer Training System (NFOTS) Curriculum.
2. Course Identification Numbers (CIN). Intermediate MC2 NFOTS, Q-2D-0280.
3. Location. Naval Air Station (NAS) Pensacola.
4. Course Status. Active.
5. Course Mission. The mission of Intermediate MC2 NFOTS training is to qualify student Naval Flight Officers (SNFO) for follow-on Advanced MC2 flight training, and to prepare them for their future responsibilities as winged Naval Flight Officers.
6. Prerequisite Training. Successful completion of the Primary NFOTS curriculum, (Q-2D-7162).
7. Security Clearance Requirements. None.
8. Follow-on Training. Upon successful completion of this syllabus, the SNFO will be enrolled in the Advanced NFOTS phase for the platform they have selected.
9. Course Length. For time-to-train calculations for this MCG, please refer to Chief of Naval Air Training (CNATRA) N3 Annual Time-to-Train Entitlement Notice for active 1542 series instructions on the CNATRA web site: <https://cnatra.navy.mil> under Resources, Publications, CNATRA OPS Documents.
10. Class Capacity. Variable.
11. Instructor Requirements. As established by Chief of Naval Operations (CNO) planning factors.
12. Course Curriculum Model Manager. Commander, Training Air Wing SIX (COMTRAWING SIX).
13. Quota Management Authority. CNATRA.
14. Quota Control. CNO.

15. Course Training Subjects

a. Intermediate MC2 Training

(1) Administration

ADMINISTRATION		
Stage	Symbol	Hours
Intermediate MC2 Check-In and Checkout	ADM0101-2	4.0
Totals		4.0

(2) Ground Training

GROUND TRAINING		
Stage	Symbol	Hours
Aviation Student Indoctrination	ASI0101-12	8.0
Operational Flight Planning and Navigation	NAV0101-8	13.0
Operational Flight Planning and Navigation Exam	NAV0109	1.5
Communications, Flight Instruments, and Navigation Systems	NAV0201-6	6.5
Nav, Comm Systems, and Radar Nav Systems Exam	NAV0207	1.5
Sensor and Link Operations	SEN0101-13	21.0
Sensor and Link Operations Exam	SEN0114	1.5
Fleet Operations	OPS0101-14	19.5
Fleet Operations Exam	OPS0115	1.5
Totals		74.0

(3) Simulator Preparation

SIMULATOR PREPARATION		
Stage	Symbol	Hours
Navigation Familiarization Simulator Preparation 1	NAV1101-6	7.5
MCS EP Boldface Procedures Test, Review, and Remediation	NAV1107-8	1.0
Navigation Familiarization Simulator Preparation 2	NAV1201-3	7.5
Sensor and Link Operations Simulator Preparation	SEN1101-2	7.0
Fleet Operations Simulator Preparation	OPS1101-2	6.5
Totals		29.5

(4) Simulator Training

SIMULATOR TRAINING			
Simulator Events	Symbol	MCS	
		Flts	Hrs
Navigation Familiarization CPT	NAV2101-2	2	3.0
Navigation Familiarization	NAV3101-4	4	6.0
Sensor Operations CPT	SEN2101	1	1.5
Sensor Operations	SEN3101-5	5	7.5
Link Operations CPT	SEN2201	1	1.5
Link Operations	SEN3201-3	3	4.5
Fleet Operations CPT	OPS2101	1	1.5
Fleet Operations	OPS3101-6	6	9.0
Fleet Operations Check Flight	OPS3290	1	1.5
Totals		24	36.0

16. Training Time Analysis. In addition to the hours formally planned and scheduled for academic classes and simulator events, significant additional time to prepare and study outside of scheduled training hours should be expected by the SNFO. The amount of time will vary depending on the complexity of the material and individual student needs, and may be up to several hours per event. For simulator events, specific brief times will be programmed into the CNATRA approved Training Management System (TMS) and accounted for on the flight schedule, per the following table:

ADDITIONAL FORMAL TRAINING TIME PER CURRICULUM HOUR/EVENT			
Training Area	Brief	Debrief	Total
Simulator Events: All	1.0	1.0	2.0

17. Physical Requirements. As specified in the Manual of the Medical Department, Chapter 15, and all applicable anthropometric standards.

18. Obligated Service. Refer to MILPERSMAN for Naval personnel.

19. Primary Instruction Methods. Lecture, Mediated Interactive Lecture (MIL), Computer Aided Instruction (CAI), self and group-paced study, facility tours, and 2B51 Multi-Crew Simulator (MCS) events.

20. Preceding Curriculum Data. Replaces CNATRAINST 1542.180.

21. Student Performance Measurement and Application of Standards. The standards outlined in Chapter IX, Course Training Standards (CTS), are used to evaluate performance for all items on all events. Final judgment regarding the satisfactory performance of any item rests with the instructor. Refer to CNATRAINST 1500.4K for further guidance.

ABBREVIATIONS

The following is a list of abbreviations used in the curriculum:

ACU	-	Air Control Unit
AIC	-	Air Intercept Control
AIM	-	Aeronautical Information Manual
ASI	-	Aviation Student Indoctrination
ASW	-	Anti-Submarine Warfare
ATC	-	Air Traffic Control
ATF	-	Aviation Training Form
ATJ	-	Aviation Training Jacket
BDA	-	Battle Damage Assessment
BHA	-	Bomb Hit Assessment
CA	-	Class Advisor
CAI	-	Computer-Aided Instruction
CCOI	-	Critical Contact of Interest
CDI	-	Course Deviation Indicator
CI	-	Contract Instructor
CNATRA	-	Chief of Naval Air Training
CO	-	Commanding Officer
COI	-	Contact of Interest
COMM	-	Communications
COMTRAWING SIX	-	Commander, Training Air Wing SIX
CO-PC	-	Commanding Officer Progress Check
CRM	-	Crew Resource Management
CTS	-	Course Training Standard
CWC	-	Composite Warfare Commander

DL	-	Data Link
DOR	-	Drop On Request
EA	-	Electronic Attack
EO	-	Electro-Optical
EOB	-	End of Block
EP	-	Emergency Procedure/Electronic Protection
ES	-	Electronic Warfare Support
ESM	-	Electronic Warfare Support Measures
ET	-	Extra Training
EW	-	Electronic Warfare
FAA	-	Federal Aviation Administration
FAM	-	Familiarization
FAR	-	Federal Aviation Regulations
FEZ	-	Fighter Engagement Zone
FIR	-	Flight Information Region
FLIP	-	Flight Information Publication
FLTOPS	-	Fleet Operations
FMS	-	Flight Management System
FOTC	-	Force Over the Horizon Track Coordinator
FTI	-	Flight Training Instruction
GPS	-	Global Positioning System
H/X	-	Hours per Event
HF	-	High Frequency
IAW	-	In Accordance With
ICAO	-	International Civil Aviation Organization
ICS	-	Intercommunication System

IFF	-	Identification Friend or Foe
IFR	-	Instrument Flight Rules
INFO	-	Instructor Naval Flight Officer
INS	-	Inertial Navigation System
IPC	-	Initial Progress Check
IR	-	Infrared
ISAR	-	Inverse Synthetic Aperture Radar
JEZ	-	Joint Engagement Zone
LECT	-	Lecture
MAC	-	Maritime Air Controller
MAP	-	Missed Approach Point
MC2	-	Maritime Command and Control
MCG	-	Master Curriculum Guide
MCS	-	Multi-Crew Simulator
MEZ	-	Missile Engagement Zone
MIF	-	Maneuver Item File
MIL	-	Mediated Interactive Lecture
NAV	-	Navigation
NAVAID	-	Navigational Aid
NFO	-	Naval Flight Officer
NFOTS	-	Naval Flight Officer Training System
NFS	-	Naval Flight Student
NG	-	No Grade
NLT	-	No Later Than
NM	-	Nautical Miles
NORDO	-	No Radio

NOTAM	-	Notice to Air Missions
NSS	-	Naval Standard Score
OPS	-	Operations
OPSO	-	Operations Officer
P/P	-	Pencil and Paper
RADAR	-	Radio Detection and Ranging
ROE	-	Rules of Engagement
RRU	-	Ready Room Unsatisfactory
SA	-	Situational Awareness
SAR	-	Search and Rescue/Synthetic Aperture Radar
SATCOM	-	Satellite Communications
SNFO	-	Student NFO
SOP	-	Standard Operating Procedure
SS	-	Self-Study
SSC	-	Surface Surveillance Coordination
SSR	-	Special Syllabus Requirement
SURPIC	-	Surface Picture
SUW	-	Surface Warfare
SYS	-	Communications and Navigation Systems
TACAN	-	Tactical Air Navigation
TACPLOT	-	Tactical Plot Manager
TACREP	-	Tactical Reports
TRAWING	-	Training Air Wing
TRB	-	Training Review Board
TTT	-	Time To Train
UNSAT	-	Unsatisfactory

- UHF - Ultra High Frequency
- WU - Warm Up
- VHF - Very High Frequency
- VOI - Vessel of Interest
- XO - Executive Officer

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GLOSSARY

1. Advancing X. Completed event within the normal syllabus flow. Excludes events with last characters in the range 84-89.
2. Aviation Training Form (ATF). A form used to document training performance in the Naval Aviation Training Command pipelines (computer generated grade sheets and supplemental administrative documents).
3. Aviation Training Jacket (ATJ). A complete administrative record of all aviation training received while attending flight training at Naval Aviation Training Command (NATRACOM) activities. It contains ATFs, calendar card, grade reports, and all other associated training information. The NSF's ATJ is maintained in student control and follows the students through all phases of training.
4. Block of Training. A sequential series of lessons within a training stage sharing identical MIFs. The second numerical character in the lesson designator identifies the block.
5. Blue Supplemental ATF. A document that states the purpose and background for CO-directed ET sortie(s) that is printed on blue paper. This document is filed on the left side of the student ATJ.
6. Check Flight. A simulator check event in any stage of training.
7. Class Advisor. An instructor assigned to each class to act as a mentor and advisor who monitors students' progress, assist when difficulties arise, and instill the Naval Aviation culture.
8. Commanding Officer Progress Check (CO-PC). A progress check either directed by the Commanding Officer or triggered by NFS performance. A satisfactory CO-PC returns the student to normal syllabus flow. An UNSAT CO-PC results in a TRB.
9. Course of Training. The entire program of simulation, academics, and officer development conducted in all media during the programmed training days.
10. Course Training Standard (CTS). CTS defines the behavior associated with each maneuver and the standards or tolerances required to earn a grade of Good/4. These standards are defined in Chapter IX.
11. Courseware. The technical data, FTIs, audio, video, film, CAI, MIL, instructor guides, student study guides, and other training material developed to support and implement the syllabus of instruction.

12. Deliverables. A CNATRA 1542/1827 TRB Summary Form generated by the TRB that summarizes a specific student's progress in a given syllabus and provides detailed information on the application of NFO training for that student. Deliverables indicate whether the quality and continuity of training provided was IAW CNATRAINST 1542.180A.
13. Drop on Request (DOR). The self-initiated termination of training. Anytime a student makes a statement such as "I quit" or "DOR," that student shall be immediately removed from the training environment and referred to the training officer for administrative action.
14. Emergency Procedures (EP). An established procedure used by aircrew to assist in safely controlling the aircraft in the event of a flight control failure or airborne emergency.
15. End of Block (EOB). Last event in a block. The NFS must meet or exceed MIF on all mandatory items in the block to progress past EOB.
16. Event. A scheduled period of prescribed instruction. It may be in an academic or laboratory classroom, a simulator, or flight environment.
17. Extra Training (ET). Additional student training events ordered by the CO in order to remediate training deficiencies.
18. Flight Training Instruction (FTI). Training publications that define maneuvers and acceptable performance standards for each maneuver the student is expected to perform.
19. Hours per Event (H/X). The resourced duration for each event, rounded to the nearest tenth of an hour.
20. Initial Progress Check (IPC). A special check performed by the most experienced instructors that have a complete understanding of NATRACOM and PC processes, and understand the gravity of their responsibility in helping maintain the standards of Naval Aviation. An UNSAT IPC results in a CO-PC.

21. Lesson Designator. All syllabus events have a lesson designator consisting of a stage identifier of up to three letters and an event code of four numbers representing order and required resourcing. Refer to the CNATRA 1550.6F CH-1 for further information.

Char	Meaning	Remarks
1 st – 3 rd	Stage	ADM - Administration ASI - Aviation Student Indoctrination NAV - Navigation Familiarization OPS - Fleet Operations SEN - Sensor and Link Operations
4 nd	Media	0 - Ground Event 1 - Academics 2 - CPT 3 - Simulator
5 th	Block	Sequential, indicating block within stage.
6 th & 7 th	Event/ Check Identifier	Sequential, indicating event within block, or other event types as shown below: 84 - Adaptation Flight 85 - Practice Simulator 86 - Warmup 87 - Extra Training 88 - Initial Progress Check 89 - CO-Progress Check 90 - Check Flight

22. Mandatory Item. Any maneuver coded with a plus sign (+). This symbol indicates the maneuver is required and must be accomplished to the specified standard in that block of training.

23. Maneuver Item File (MIF). A chart listing the required maneuvers and associated proficiency levels for a particular block of flight training.

24. Master Curriculum Guide (MCG). A CNATRA instruction tailored to a specific phase of training.

25. Phase of Training. The chief subdivisions of a course. The MC2 NFOTS syllabus is comprised of T-6A Primary, Intermediate MC2 and one of three Advanced MC2 phases of training.

26. Pink ATF. A standard ATF that is printed on pink paper. The pink ATF is used to denote an UNSAT event.

27. Progress Check Instructor. An instructor authorized by the CO to administer an Initial Progress Check or a Commanding Officer Progress Check.

28. Ready Room Unsatisfactory (RRU). An UNSAT grade given for inadequate knowledge of flight procedures, systems, discuss items, emergency procedures, or deficient pre-flight planning or failure of a non-academic examination (e.g., NATOPS exam). Note, missing a brief does not constitute an RRU and shall be documented on a supplemental ATF. Refer to CNATRAINST 1500.4K for further information on missed briefs.
30. Self-Study Events (SS). A hard scheduled ground training event designed to prepare the student for the next block of simulator training. This event may be scheduled as a monitored classroom event, or it may be scheduled as individual unsupervised study time.
31. Special Syllabus Requirement (SSR). One-time, ungraded demonstration item.
32. Stage. A subdivision of a phase, comprised of events leading to a single set of objectives, designated by a common symbol (e.g., Instrument Navigation or Formation). Refer to CNATRAINST 1550.6F CH-1 for further information.
33. Standard Operating Procedure (SOP). An instruction or directive that provides guidance on TRAWING or squadron operating rules.
34. Training Media. Intermediate MC2 NFOTS media include the 2B 51 simulator, ground training and simulator support lectures. The first numerical character in the lesson identifier designates the training media. Refer to CNATRAINST 1550.6F CH-1 for further information.
35. Training Review Board (TRB). A fact-finding board appointed to conduct an administrative review of training following a failed CO-PC. Refer to CNATRAINST 1500.4K for further information.
36. Training Time Out (TTO). A pause in training when a NFS or instructor expresses concern for personal safety or a need exists to clarify procedures or requirements. Either the NFS or the instructor may call a TTO.
37. Warmup Event. Additional event given to allow a student to regain a level of proficiency previously demonstrated which has diminished due to a non-syllabus break in training.

Chapter I

General Instructions

1. Syllabus Management

- a. Distribution. Participating TRAWING and squadron personnel.
- b. Interpretation. The syllabus is directive. Should circumstances create situations not covered within the scope of this syllabus, or specific course of action appears to conflict with other directives, consult CNATRA (N71).
- c. Deviations. Document all deviations on the event's ATF.
- d. Changes. Recommended changes shall be submitted IAW CNATRINST 1550.6F CH-1.
- e. Execution. All students execute Chapters II through VIII.
- f. Syllabus Description. Intermediate MC2 NFOTS is divided into three stages, each with academic and ground training, simulator support lectures and simulator events. Simulator events are executed in the 2B51 Multi-Crew Simulator (MCS) training device. Each stage is designed to focus on similar flight training regimes such as Navigation or Sensor Operation. Each stage is subdivided into training blocks and each training block consist of a specified number of events. MIFs identify the minimum acceptable level of performance in relation to the CTS that must be achieved at the completion of each training block.
- g. Grade Calculation. Refer to CNATRINST 1500.4K for information on SNFO grade calculations, Phase Aggregate Score (PAS) and Naval Standard Score (NSS).

2. Training Management

a. Syllabus Progression. Fly syllabus events within each stage sequentially. Do not start a block without all prerequisites. NFSs may be in different stages or blocks simultaneously. Where applicable, NFSs will be eligible for, and shall be prepared for, more than one syllabus event. NFSs must complete all events except as listed in paragraph 1e. The flowcharts on pages I-5 and I-9 delineate the sequence of flying events and their ground training prerequisites except as listed in paragraph 1e and 2b. System training management is designed to facilitate two graded events (flight, simulator, or exam) per NFS per day.

b. Accelerated Progression. SNFOs with previous flight experience or demonstrated exceptional proficiency may warrant accelerated progression, also known as “Proficiency Advance.” A squadron CO may advance, and is encouraged to advance, an SNFO to the next block of instruction when all required items for the current block of instruction meet or exceed performance prerequisites for the follow-on block of training. This policy shall not be used to meet squadron production goals; it is strictly for instances where demonstrated proficiency makes completion of all events within a block of instruction unnecessary. All ATFs for the accelerated SNFO will be clearly marked “Accelerated Progression.” ATFs for the events not completed will include a comment in the remarks section stating, “Accelerated Progression - event not flown. ATF completed for administrative purposes only, per CNATRAINST 1500.4K.” The squadron shall closely monitor the progress of Accelerated SNFOs. If performance suffers due to acceleration, the SNFO shall return to normal syllabus progression.

(1) Other than noted exceptions, syllabus events shall be flown sequentially within each stage. A training block shall not be started without all prerequisites completed. Unless enrolled in an approved accelerated syllabus, students shall complete all events in the assigned phase of training.

(2) Flowchart on page I-5 is a depiction of Intermediate MC2 NFOTS course flow, which delineates the sequence of events and their ground training prerequisites. System training management is designed to facilitate up to two graded events (simulator or exam, or combination thereof) per student per day.

(3) The first simulator event in stage must be completed within 14 calendar days of the associated block or stage simulator support lecture. The associated block or stage simulator support lecture must be redone if 14 or more days have elapsed.

(4) The first event in stage cannot be completed the same day as the associated simulator event support lecture(s).

c. Maneuver Continuity. Students should be allowed to attempt previously introduced maneuvers frequently enough to maintain required proficiency.

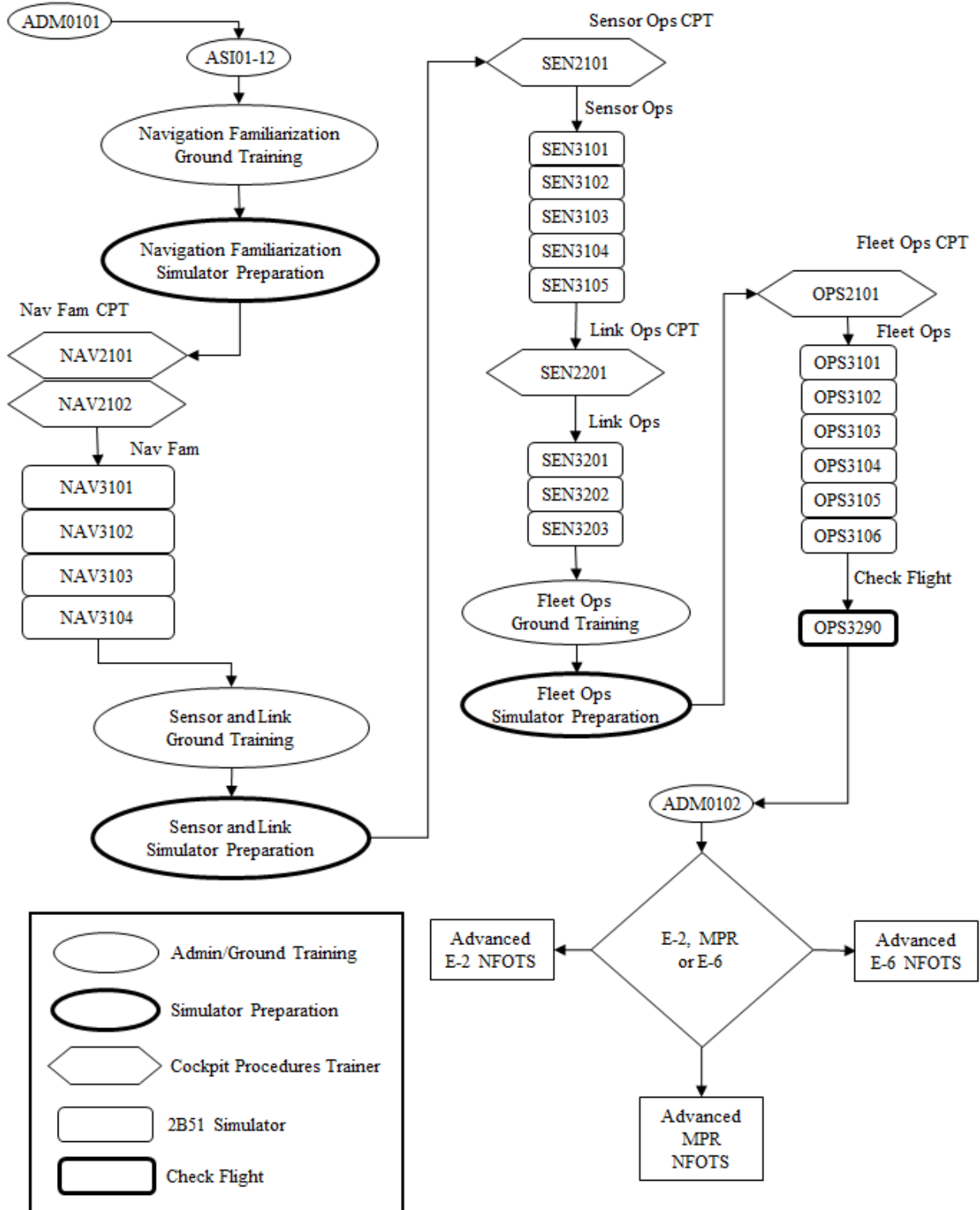
d. Hours per Event (H/X). Instructors shall plan and execute missions to meet H/X as closely as possible. If actual sortie length varies from H/X by more than 0.3 hours, the instructor shall annotate the reason in the ATF general comments section. This only applies strictly to flight events, as simulator events shall be conducted for the entire syllabus event H/X stated in the respective MCG. Refer to CNATRAINST 1500.4K for further clarification.

e. Special Syllabus Requirements (SSR). Unless noted otherwise, instructors may accomplish SSRs on any event within the block. Annotate which SSRs were completed in the ATF’s Maneuver Comments section. Assign NG/1 as the SSR maneuver grade and annotate date of exposure on the SSR tab.

- f. Aviation Training Jacket (ATJ) Reviews. The Class Advisor (CA) shall conduct jacket reviews IAW CNATRAINST 1500.4K.
3. Unsatisfactory (UNSAT) Performance. All subsequent training shall be suspended following an UNSAT event, except as addressed or authorized per this MCG.
- a. Event Progression. Following an UNSAT event, that event shall be repeated until the SNFO satisfactorily passes the event, if a PC is not required.
 - b. Remediation. Remediation of unsatisfactory performance may be specifically tailored to address deficient skillsets.
 - c. Ready Room UNSAT (RRU). A RRU is when the NFS is inadequately prepared for the scheduled simulator event. RRU's count towards PC triggers. Refer to CNATRAINST 1500.4K for further information on RRU.
 - d. Academic. An academic examination failure is UNSAT and counts towards PC triggers.

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INTERMEDIATE MC2 NFOTS COURSE FLOW



4. Training Delays and Warmup Events

a. Training Delays Within Stage. A Warmup (WU) event is given to regain flight proficiency due to a training delay within stage. WU criteria is normally based on last event in stage because Intermediate MC2 NFOTS is built on increasing levels of skill attainment between blocks. WU eligibility is based on the number of days since the last syllabus simulator event in stage. Every WU event shall ensure required skills for that block or stage are refreshed. All WU events shall be coded as a XX86 (e.g., SEN3186) and a justification shall be included in the general comments section of the ATF. Refer to CNATRAINST 1500.4K for Warmup event guidelines.

b. The following table is a quick reference regarding the use of WUs with respect to stage continuity or breaks in training:

CRITERIA FOR AWARDING WARMUP EVENTS IN STAGE		
BREAKS* (DAYS)	WARMUP EVENTS	REMARKS
7-13 Sim to Sim	1 Warmup	<ul style="list-style-type: none"> – WU is awarded at instructor’s discretion and based upon an assessment of student stage performance. – WU is prohibited if demonstrated performance is sufficient, or will be sufficient within remaining block events, by EOB.
14-30 Sim to Sim	2 Warmups	<ul style="list-style-type: none"> – First WU is not an advancing event. – Second WU is awarded at instructor’s discretion and is based upon an assessment of student stage performance. – Second WU is prohibited if demonstrated performance is sufficient, or will be sufficient within remaining block events, by EOB.

*Break = (Current Julian data) – (Julian date of last simulator event in stage)

c. Extended Training Delays Within Stage. If the period between events within stage exceeds 30 days, the squadron CO shall develop an appropriate WU training plan to regain NFS proficiency. Refer to the CNATRAINST 1500.4K for further guidance.

d. Training Delays Between Stages. WUs are intended for non-curriculum breaks in training. First events in stage following ground training are designed and graded with a reasonable delay factored in, and normally do not require a WU.

e. Extended Training Delay Between Stages. If the period between stages is greatly extended, the squadron CO shall develop an appropriate WU training plan to regain NFS proficiency. Refer to the CNATRAINST 1500.4K for further guidance.

5. Additional Simulators. Extra Training (ET) events may be awarded by the CO to compensate for either syllabus-related training deficiencies (e.g., MCG deviation) or to correct NFS performance skillset deficiencies. Refer to CNATRAINST 1500.4K for ET event guidelines.

6. Ground Training and Briefing Requirements

a. Mission Preparation, Briefings, and Debriefings

(1) EOB Events. The instructor shall carefully review the student's previous ATFs in planning the EOB event to ensure the profile includes opportunities to reach MIF on all mandatory items and demonstration items attempted in the block.

(2) Preparation. Students shall arrive for each simulator event with:

(a) A thorough knowledge of:

1. The Discuss Items, as listed in Chapters III-VIII.

2. Procedural knowledge of the mandatory and demonstration items for the event's training block.

(b) An event profile tailored to training requirements, weak areas, and continuity.

(c) The latest ATF for the stage.

(d) Discuss items from the daily squadron flight schedule.

(3) Briefing. The instructor shall review the student's previous block ATFs before each event. Thoroughly cover the current mission's:

(a) Discuss Items, as listed in Chapters II-VIII.

(b) Specific objectives.

(c) Techniques and required procedures for accomplishing those objectives.

(d) Planned profile and contingencies.

(4) Debriefing

(a) After each event, the instructor shall critique the student's performance using cause and effect analysis, particularly with respect to the CTS.

(b) The mission's complexity and student's progress will govern the time required for debrief. For simulator events conducted by contract instructors, at no time shall the debrief time be less than MCG stated time. In some cases, an extended CI debrief may be required due to student performance.

(c) Debriefing must be detailed and comprehensive. The ATF shall be completed prior to the student's next event.

b. Emergency Procedures (EP) Briefing and Training. EP training builds the student's confidence in the aircraft. Incorporate EP training into simulator events when practical; however, instructional block objectives take precedence.

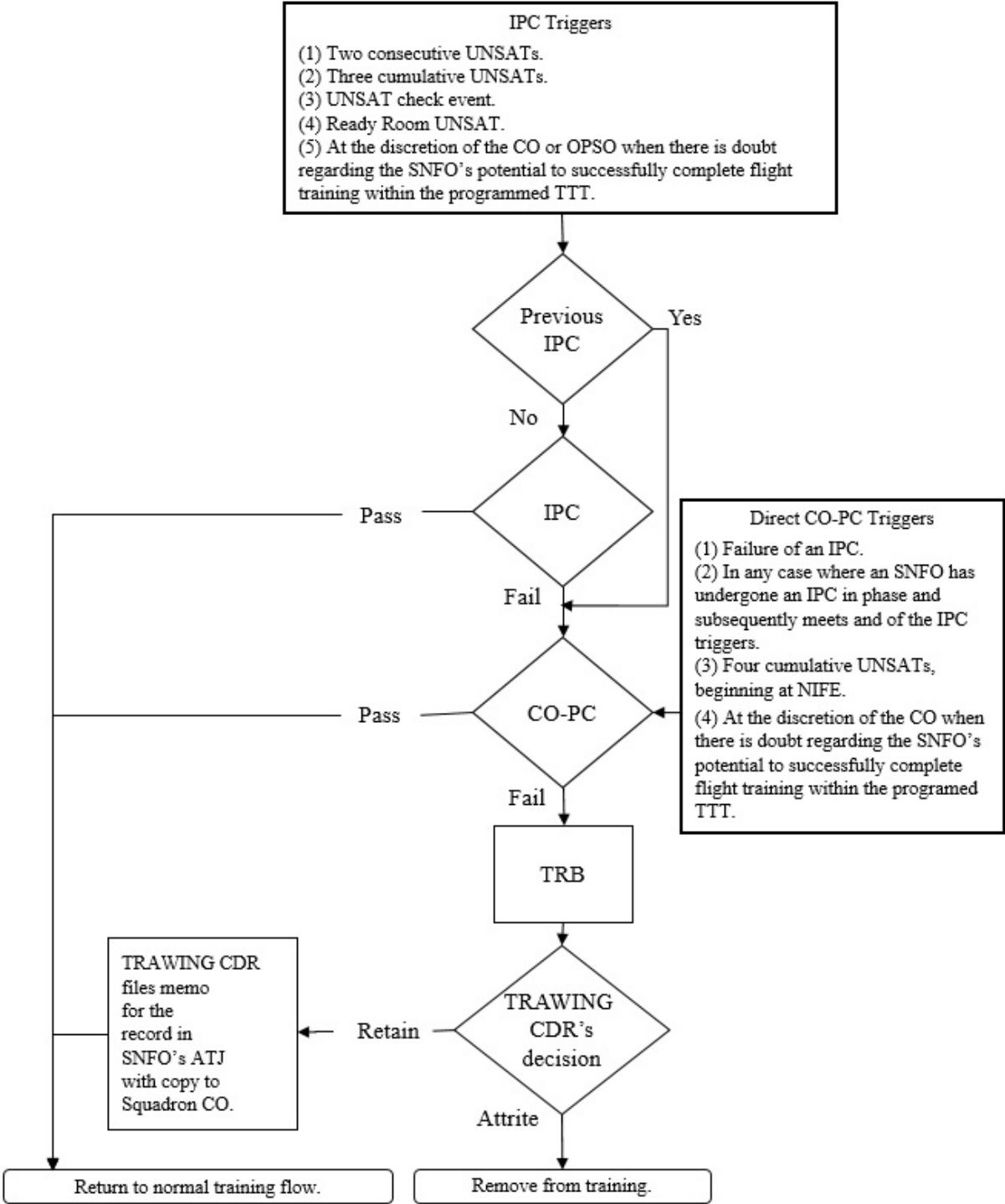
7. Mission Grading Procedures and Evaluation Policies. Refer to CNATRAINST 1500.4K.

8. Failure to Maintain Required Standards. Administrative procedures are established for NFSs that fail to meet the minimum acceptable standards. It is the reviewing authority's responsibility to ensure that resources are not expended on those individuals that clearly demonstrate an inability to achieve curriculum criteria within normal time limitations. NATRACOM flight training is designed to enable students to meet minimum curriculum standards within the published TTT.

a. Progress Checks. Progress Checks (PC) are holistic reviews of an NFS's proficiency, judgment, air sense, and overall ability to operate safely and confidently. The intent of every PC is to determine whether the NFS has the potential to reach the defined training standards of the current phase of training within the designated TTT, while demonstrating the potential to successfully complete remaining undergraduate and, for Advanced NFSs, FRS-level training. Refer to CNATRAISNT 1500.4K for further guidance on Progress Checks.

b. The flowchart on page I-9 outlines the NFOTS Progress Check Training Review Process.

NFOTS PROGRESS CHECK TRAINING REVIEW PROCESS



9. Special Instructions and Restrictions

a. Simulator Hour/Event Requirements and Restrictions

(1) Maximum Daily Student Activities (Simulator or Academic). Students shall not exceed two graded activities during one duty day.

(2) Minimum Student Turn-Times. When scheduled for two simulator events on the same day, SNFOs must have at least one hour between the first event's debrief and second event's brief.

(3) Crew Day. The elapsed time from the beginning of the student's first event or official duty of the day until the completion of the last event of the day, including associated debrief and paperwork. Student crew day shall not exceed 12 hours.

(4) Crew Rest. A minimum of 12 hours shall elapse between the conclusion of the student's last scheduled event of the day, including the associated debrief, and the first scheduled event, including the associated brief, of the following day. After six consecutive scheduled days, students shall be given one day off. Official duty, squadron training, and standby scheduling do not qualify as a day off.

b. Source Documents. Students are responsible for reviewing applicable source documents (e.g., NATOPS, FTIs, local SOPs, and Stage Standardization Notes) prior to commencing each stage of training.

c. Maneuver Demonstrations. Syllabus item demonstrations shall be accomplished as required.

Chapter II

Ground Training

<u>Blk #</u>	<u>Media</u>	<u>Title</u>	<u>Events</u>	<u>Hrs</u>	<u>Blk Name</u>
ADM01	Class	Administration	2	4.0	Admin

1. Prerequisite. OPS3290 prior to ADM0102.

2. Events

ADM0101	Admin	Intermediate MC2 Check-In		2.0	
ADM0102	Admin	Intermediate MC2 Checkout		2.0	

3. Syllabus Notes. After Intermediate MC2 Checkout, graduates proceed to one of three Advanced MC2 NFOTS phases.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
ASI01	Class	Aviation Student Indoctrination	12	8.0	ASI

1. Prerequisites

- a. ADM0101 prior to ASI0101.
- b. ASI0101 prior to ASI0102-9 (any order).
- c. ASI0109 prior to ASI0110-12 (in order).

2. Events

ASI0101	Lect	Intermediate MC2 Welcome Aboard	.75
ASI0102	Lect	Class Advisor Brief	.75
ASI0103	Lect	Student Control Brief	.75
ASI0104	Lect	VT-4 CO Brief	1.0
ASI0105	Lect	VT-4 XO Brief	.50
ASI0106	Lect	Safety Brief	.25
ASI0107	Lect	Medical Brief	.25
ASI0108	Lab	Class Photo	.50
ASI0109	Lect	DAPA Training	.25
ASI0110	Lect	Contract Instructor Services Brief	1.0
ASI0111	Lect	Intro to the Intermediate MC2 Syllabus	1.0
ASI0112	Lect	Intro to the 2B51 MCS Device	1.0

3. Syllabus Notes. ASI0110-12 shall be conducted by CIS.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
NAV01	Class	Operational Flight Planning and Navigation	9	14.5	NAVFLT 1

1. Prerequisite. ASI012 prior to NAV0101-9 (in order).

2. Events

NAV0101	CAI	Instrument Publications, Procedures, and Flight Planning 1 (FAA)		1.0	
NAV0102	CAI	Instrument Publications, Procedures, and Flight Planning 2 (ICAO)		1.0	
NAV0103	CAI	Planning Documents, Tools, and Considerations		1.0	
NAV0104	CAI	Basic Navigation Review		1.0	
NAV0105	MIL	Chart Projections, Planning, and Plotting Review		2.0	
NAV0106	MIL	Navigation Procedures Overview		3.0	
NAV0107	MIL	Flight Planning Lab		2.0	
NAV0108	MIL	Operational Flight Planning and Navigation Exam Review		2.0	
NAV0109	CAI Test	Operational Flight Planning and Navigation Exam		1.5	

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
NAV02	Class	Communications, Flight Instruments, and Navigation Systems	7	8.0	NAVFLT 2

1. Prerequisite. NAV0109 prior to NAV0201-7 (in order).

2. Events

NAV0201	CAI	Communications Systems		0.5	
NAV0202	CAI	Ground Based Radio NAVAIDS and Flight Instruments		0.5	
NAV0203	CAI	GPS/INS/FMS		0.5	
NAV0204	CAI	Basic Radar System Theory		1.0	
NAV0205	MIL	Nav, Comm Systems, and Radar Nav Overview		2.0	
NAV0206	MIL	Nav, Comm Systems, and Radar Nav Exam Review		2.0	
NAV0207	CAI Test	Nav, Comm Systems, and Radar Nav Systems Exam		1.5	

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
SEN01	Class	Sensor and Link Operations	14	22.5	SenLink

1. Prerequisite. NAV3104 prior to SEN0101-13 (in order).

2. Events

SEN0101	CAI	MCS Tactical Mission Brief and Tactical Radio Procedures Videos		1.5	
SEN0102	CAI	Fleet Organization and Command Structure		1.5	
SEN0103	CAI	Airborne Radar System Theory		2.0	
SEN0104	CAI	Identification Friend or Foe (IFF) System Theory		1.0	
SEN0105	CAI	Electronic Warfare Theory		2.0	
SEN0106	CAI	Electro-optical and Infrared System Theory		1.0	
SEN0107	CAI	Surface Threats and Missions		1.0	
SEN0108	CAI	Data Link Overview		1.0	
SEN0109	CAI	Tactical Communications and Brevity		1.0	
SEN0110	MIL	Warfare Commander Overview		1.0	
SEN0111	MIL	Data Link Employment		3.0	
SEN0112	MIL	Sensor Capabilities and Procedures		4.0	
SEN0113	MIL	Sensor and Link Operations Exam Review		2.0	
SEN0114	CAI Test	Sensor and Link Operations Exam		1.5	

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
OPS01	Class	Fleet Operations	15	21.0	FltOps

1. Prerequisite. SEN3203 prior to OPS0101-15 (in order).

2. Events

OPS0101	CAI	U.S. Naval Platforms and Missions Overview		0.5	
OPS0102	CAI	Surface Warfare Concepts		0.5	
OPS0103	CAI	SUW Sensors and Employment		0.5	
OPS0104	CAI	Surface Search, Localization, and Tracking Methods		0.5	
OPS0105	CAI	SUW Weapons and Delivery Platforms		0.5	
OPS0106	MIL	Data Link and Tactical Comm Integration		1.0	
OPS0107	MIL	SUW Overview		3.0	
OPS0108	CAI	Strike Coordination and Asset Management		1.0	
OPS0109	CAI	Strike Support Operations		1.0	
OPS0110	CAI	Aircraft Self-Defense Concepts		1.0	
OPS0111	CAI	Maritime Strike		1.0	
OPS0112	MIL	Search and Rescue		3.0	
OPS0113	MIL	Strike and Fleet Support Overview		4.0	
OPS0114	MIL	Fleet Operations Exam Review		2.0	
OPS0115	CAI Test	Fleet Operations Exam		1.5	

3. Syllabus Notes. None.

4. Discuss Items. None.

Chapter III

NATOPS Training

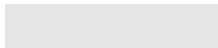
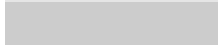
This chapter does not apply to the Intermediate MC2 NFOTS phase of training.

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Chapter IV

Navigation Familiarization Training

1. Seating. Student shall occupy a student station in the MCS device.
2. Matrices. The following matrix is an overview of the entire Navigation Familiarization Stage. The purpose of this matrix is to provide the student and instructor with the easiest way to track progress and overall status in relation to the MIF. In addition, there is a single matrix following each block description throughout this chapter.
3. Navigation Familiarization Stage MIF

 Cockpit Procedures Trainer
 Simulator Event

NAVIGATION FAMILIARIZATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	NAV2102	NAV3104
1	General Knowledge/Procedures	3+	4+
2	Emergency Procedures (EP)	3+	4+
3	Headwork/Situational Awareness (SA)	3+	3+
4	Basic Air Work Recognition	3+	4+
5	System Knowledge	3+	4+
6	Mission Planning (Transit)	1	3+
8	Brief		3+
9	Ground Operations	1	4+
10	Departure	1	4+
11	En route Procedures	1	4+
14	Equipment Operation	3+	3+
15	Radar Utilization	1	1
16	Surveillance Radar Utilization	1	1
29	Approach	1	3+

MIF continued on next page.

NAVIGATION FAMILIARIZATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	NAV2102	NAV3104
30	Checklists	1	4+
31	Fuel Management/Analysis	1	4+
32	ATC Radio Procedures	1	3+
41	Crew Resource Management (CRM)	1	3+
42	Mission Ownership	1	3+
43	Prioritization	1	3+
44	Scan	1	3+
45	Debrief		1

Blk #	Media	Title	Events	Hrs	Blk Name
NAV11	Class/Lab	Navigation Familiarization Simulator Preparation 1	8	8.5	NAVSIM PREP 1

1. Prerequisite. NAV0207 prior to NAV1101-8 (in order).

2. Events

NAV1101	CAI	MCS Brief and Setup Videos		1.0	
NAV1102	MIL	CNAF M-3710.7 Overview		1.0	
NAV1103	MIL	MCS System Failures and Emergency Procedures		1.0	
NAV1104	MIL	MC2 Crew Resource Management		2.5	
NAV1105	MIL	MCS Operational Risk Management		1.0	
NAV1106	MIL	Introduction to the MCS Capabilities, Procedures, and Crew Interface		1.0	
NAV1107	P/P Test	MCS EP Boldface Procedures Test		0.5	
NAV1108	Lab	MCS EP Boldface Procedures Test Review and Remediation		0.5	

3. Syllabus Notes. All SNFOs are required to successfully accomplish an MCS EP Boldface Procedures Test. **Successful accomplishment of the MCS EP Boldface Test requires 100 percent accuracy.** Less than 100 percent on the MCS EP Boldface Procedures Test will result in an UNSAT.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
NAV12	Class/ MCS	Navigation Familiarization Simulator Preparation 2	3	7.5	NAVSIM PREP 2

1. Prerequisite. NAV1108 prior to NAV1201-3 (in order).

2. Events

NAV1201	MIL	NAV Simulator Preparation		3.5	
NAV1202	MCS	MCS Device Familiarization (FAM-0)		1.5	
NAV1203	Lab/SS	NAV Self-Study		2.5	

3. Syllabus Notes

a. NAV1202 is a single ground training event conducted by the academic instructor in the 2B51 MCS device. The event shall be scheduled with no more than three students per training seat, e.g., seat 1-1 or 2-3.

b. NAV1203 is a formally scheduled student study period that does not require an instructor be assigned.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	H/X
NAV21	MCS	Navigation Familiarization CPT	2	3.0	1.5

1. Prerequisite. NAV1203 prior to NAV2101-2 (in order).
2. Syllabus Notes
 - a. NAV1201 and NAV1202 shall not be scheduled on the same day as NAV2101.
 - b. Students will begin the event on deck.
 - c. Instructor shall demonstrate IOS operation and student station operation on the NAV2101. The appropriate items shall be assigned a grade of “1” on the ATF.
 - d. Instructor shall demonstrate student station operation and en route procedures on the NAV2102. The appropriate items shall be assigned a grade of “1” on the ATF.
 - e. Due the material being covered during these events, there is no brief or debrief required. Additionally, due to the unique design of the MCS device, a single instructor may conduct up to two like student CPT events simultaneously, if scheduled in the same training suite, e.g., two NAV2101 events conducted in seat 1-1 and 1-2.
3. Special Syllabus Requirements. None.
4. Discuss Items. None
5. Block MIF

CTS REF	MANEUVER	NAV2102
1	General Knowledge/Procedures	3+
2	Emergency Procedures (EP)	3+
3	Headwork/Situational Awareness (SA)	3+
4	Basic Air Work Recognition	3+
5	System Knowledge	3+
6	Mission Planning (Transit)	1

MIF continued on next page.

CTS REF	MANEUVER	NAV2102
9	Ground Operations	1
10	Departure	1
11	En route Procedures	1
14	Equipment Operation	3+
15	Radar Utilization	1
16	Surveillance Radar Utilization	1
29	Approach	1
30	Checklists	1
31	Fuel Management/Analysis	1
32	ATC Radio Procedures	1
41	Crew Resource Management (CRM)	1
42	Mission Ownership	1
43	Prioritization	1
44	Scan	1

Blk #	Media	Title	Events	Hrs	H/X
NAV31	MCS	Navigation Familiarization	4	6.0	1.5

1. Prerequisite. NAV2102 prior to NAV3101-4 (in order).
2. Syllabus Notes. Students will begin the event from aircraft parking.
3. Special Syllabus Requirements. None.
4. Discuss Items

NAV3101

EHSI, TACAN system and Cursor information.

NAV3102

FMS setup and operation, INS and GPS.

NAV3103

HF radio and HF Global System, and SATCOM radio.

NAV3104

ADIZ and FIR.

5. Block MIF

CTS REF	MANEUVER	NAV3104
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	3+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
6	Mission Planning (Transit)	3+
8	Brief	3+
9	Ground Operations	4+

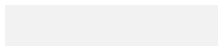
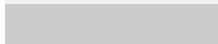
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CTS REF	MANEUVER	NAV3104
10	Departure	4+
11	En route Procedures	4+
14	Equipment Operation	3+
15	Radar Utilization	1
16	Surveillance Radar Utilization	1
29	Approach	3+
30	Checklists	4+
31	Fuel Management/Analysis	4+
32	ATC Radio Procedures	3+
41	Crew Resource Management (CRM)	3+
42	Mission Ownership	3+
43	Prioritization	3+
44	Scan	3+
45	Debrief	1

Chapter V

Sensor and Link Operations Training

1. Seating. Student shall occupy a student station in the MCS device.
2. Matrices. The following matrices are an overview of Sensor and Link Operations stage. The purpose of these matrices is to provide the student and instructor the easiest way to track progress and overall status in relation to the MIF. In addition, there is a single matrix following each block description throughout this chapter.
3. Sensor and Link Operations Stage MIF

 Cockpit Procedures Trainer
 Simulator Event

SENSOR AND LINK OPERATIONS STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	SEN2101	SEN3105	SEN2201	SEN3203
1	General Knowledge/Procedures	4+	4+	4+	4+
2	Emergency Procedures (EP)	4+	4+	4+	4+
3	Headwork/Situational Awareness (SA)	4+	4+	4+	4+
4	Basic Air Work Recognition	4+	4+	4+	4+
5	System Knowledge	4+	4+	4+	4+
7	Mission Planning (Operations)	3+	3+	3+	3+
8	Brief		3+		3+
12	On-Station/Check-In Procedures	3+	3+	3+	3+
13	On-Station Navigation	3+	3+	3+	3+
14	Equipment Operation	3+	4+	4+	4+
15	Radar Utilization	3+	4+	3+	4+
16	Surveillance Radar Utilization	1	1	1	1
17	Synthetic Aperture Radar Utilization	1	1	1	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1	1	1	1

MIF continued on next page.

SENSOR AND LINK OPERATIONS STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	SEN2101	SEN3105	SEN2201	SEN3203
19	Identification Friend or Foe (IFF) Utilization	1	1	1	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	1	3+	1	4+
21	Electronic Support Measure (ESM) Utilization	1	3+	1	4+
22	Data Link Utilization		1	2+	4+
28	Off-Station/Turnover			1	3+
30	Checklists	4+	4+	4+	4+
33	Tactical Radio Procedures	3+	3+	3+	3+
34	Parrot/India Checks	1	1	1	1
35	Air Control Unit (ACU) Check-In	1	1	1	1
36	Tactical Reports (TACREP)	1	1	1	1
37	Surface Contact Reports	1	1	1	1
38	Alpha Check	1	1	1	1
39	Air to Air Calls	1	1	1	1
40	Plain Voice Communications	1	1	1	1
41	Crew Resource Management (CRM)	3+	4+	3+	4+
42	Mission Ownership	3+	3+	3+	3+
43	Prioritization	3+	3+	3+	3+
44	Scan	3+	3+	3+	3+
45	Debrief		3+		3+

Blk #	Media	Title	Events	Hrs	Blk Name
SEN11	Class/Lab	Sensor and Link Operations Simulator Preparation	2	7.0	SENOPS PREP

1. Prerequisite. SEN0114 prior to SEN1101-2 (in order).

2. Events

SEN1101	MIL	Sensor and Link Ops Simulator Preparation	4.0
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SEN1102	Lab/SS	Sensor and Link Ops Self-Study	3.0
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3. Syllabus Notes. SEN1102 is a formally scheduled student study period that does not require an instructor be assigned.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	H/X
SEN21	MCS	Sensor Operations CPT	1	1.5	1.5

1. Prerequisite. SEN1102 prior to SEN2101.

2. Syllabus Notes

a. SEN2101 shall not be schedule on the same day as SEN1101.

b. Students will begin this event airborne.

c. The instructor shall introduce MCS airborne setup checklist, radar utilization, and tactical radio procedures on the SEN2101 and assign a grade of “1” for each item on the ATF.

d. Due to the material being covered during these events, there is no brief or debrief required. Additionally, due to the unique design of the MCS device, a single instructor may conduct up to two like student CPT events simultaneously, if scheduled in the same training suite, e.g., two (2) SEN2101 events conducted in seat 1-1 and 1-2.

3. Special Syllabus Requirements. None.

4. Discuss Items. None

5. Block MIF

CTS REF	MANEUVER	SEN2101
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	3+
12	On-Station/Check-In Procedures	3+
13	On-Station Navigation	3+
14	Equipment Operation	3+

MIF continued on next page.

CTS REF	MANEUVER	SEN2101
15	Radar Utilization	3+
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	1
21	Electronic Support Measure (ESM) Utilization	1
30	Checklists	4+
33	Tactical Radio Procedures	3+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check-In	1
36	Tactical Reports (TACREP)	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1
41	Crew Resource Management (CRM)	3+
42	Mission Ownership	3+
43	Prioritization	3+
44	Scan	3+

Blk #	Media	Title	Events	Hrs	H/X
SEN31	MCS	Sensor Operations	5	7.5	1.5

1. Prerequisite. SEN2101 prior to SEN3101-5 (in order).

2. Syllabus Notes

a. SEN3101 shall not be scheduled on the same day as SEN2101.

b. Students will begin each event airborne.

c. The instructor shall demonstrate the Mission Specifics section of the brief for SEN3101, but a grade of “1” is not required on the ATF, and shall demonstrate the SEN3101 event debrief.

3. Special Syllabus Requirements. None.

4. Discuss Items

SEN3101

Radar system components and operation.

SEN3102

IFF modes and operation.

SEN3103

ESM system components and operation, and EW.

SEN3104

EO/IR system components and operation.

SEN3105

Sensor integration and prioritization.

5. Block MIF

CTS REF	MANEUVER	SEN3105
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	3+
8	Brief	3+
12	On-Station/Check-In Procedures	3+
13	On-Station Navigation	3+
14	Equipment Operation	4+
15	Radar Utilization	4+
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	3+
21	Electronic Support Measure (ESM) Utilization	3+
22	Data Link Utilization	1
30	Checklists	4+
33	Tactical Radio Procedures	3+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check-In	1
36	Tactical Reports (TACREP)	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1

MIF continued on next page.

CTS REF	MANEUVER	SEN3105
41	Crew Resource Management (CRM)	4+
42	Mission Ownership	3+
43	Prioritization	3+
44	Scan	3+
45	Debrief	3+

Blk #	Media	Title	Events	Hrs	H/X
SEN22	MCS	Link Operations CPT	1	1.5	1.5

1. Prerequisite. SEN3105 prior to SEN2201.

2. Syllabus Notes

a. Students will begin this event airborne.

b. The instructor shall introduce data link utilization on the SEN2201 and assign a grade of “1” on the ATF.

c. Due to the material being covered during these events, there is no brief or debrief required. Additionally, due to the unique design of the MCS device, a single instructor may conduct up to two like student CPT events simultaneously, if scheduled in the same training suite, e.g., two (2) SEN2201 events conducted in seat 1-1 and 1-2.

3. Special Syllabus Requirements. None.

4. Discuss Items. None

5. Block MIF

CTS REF	MANEUVER	SEN2201
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	3+
12	On-Station/Check-In Procedures	3+
13	On-Station Navigation	3+
14	Equipment Operation	4+
15	Radar Utilization	3+

MIF continued on next page.

CTS REF	MANEUVER	SEN2201
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	1
21	Electronic Support Measure (ESM) Utilization	1
22	Data Link Utilization	2+
28	Off-Station/Turnover	1
30	Checklists	4+
33	Tactical Radio Procedures	3+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check-In	1
36	Tactical Reports (TACREP)	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1
41	Crew Resource Management (CRM)	3+
42	Mission Ownership	3+
43	Prioritization	3+
44	Scan	3+

Blk #	Media	Title	Events	Hrs	H/X
SEN32	MCS	Link Operations	3	4.5	1.5

1. Prerequisite. SEN2201 prior to SEN3201-3 (in order).
2. Syllabus Notes
 - a. Students will begin each event airborne.
 - b. SEN3201 shall not be scheduled on the same day as SEN2201.

3. Special Syllabus Requirements. None.

4. Discuss Items

SEN3201

Data link integration and dissemination.

SEN3202

Alpha Foxtrot (AF)/Force Over the Horizon Track Coordinator (FOTC).

SEN3203

Data link prioritization with supporting sensors.

5. Block MIF

CTS REF	MANEUVER	SEN3203
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	3+
8	Brief	3+
12	On-Station/Check-In Procedures	3+

MIF continued on next page.

CTS REF	MANEUVER	SEN3203
13	On-Station Navigation	3+
14	Equipment Operation	4+
15	Radar Utilization	4+
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	4+
21	Electronic Support Measure (ESM) Utilization	4+
22	Data Link Utilization	4+
28	Off-Station/Turnover	3+
30	Checklists	4+
33	Tactical Radio Procedures	3+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check In	1
36	Tactical Reports	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1
41	Crew Resource Management (CRM)	4+
42	Mission Ownership	3+
43	Prioritization	3+
44	Scan	3+
45	Debrief	3+

Chapter VI

Navigation Training

This chapter does not apply to the Intermediate MC2 NFOTS phase of training.

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Chapter VII

Formation Training

This chapter does not apply to the Intermediate MC2 NFOTS phase of training.

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Chapter VIII

Tactical Training

1. Seating. Student shall occupy a student station in the MCS device.
2. Matrices. The following matrices are an overview of Fleet Operations stage. The purpose of these matrices is to provide the student and instructor the easiest way to track progress and overall status in relation to the MIF. In addition, there is a single matrix following each block description throughout this chapter.
3. Fleet Operations Stage MIF

- Cockpit Procedures Trainer
- Check Flight Event

FLEET OPERATIONS STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	OPS2101	OPS3106	OPS3290
1	General Knowledge/Procedures	4+	4+	4+
2	Emergency Procedures (EP)	4+	4+	4+
3	Headwork/Situational Awareness (SA)	4+	4+	4+
4	Basic Air Work Recognition	4+	4+	4+
5	System Knowledge	4+	4+	4+
7	Mission Planning (Operations)	4+	4+	4+
8	Brief		4+	4+
12	On-Station/Check-In Procedures	4+	4+	4+
13	On-Station Navigation	4+	4+	4+
14	Equipment Operation	4+	4+	4+
15	Radar Utilization	4+	4+	4+

MIF continued on next page.

FLEET OPERATIONS STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	OPS2101	OPS3106	OPS3290
16	Surveillance Radar Utilization	1	1	1
17	Synthetic Aperture Radar Utilization	1	1	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1	1	1
19	Identification Friend or Foe (IFF) Utilization	1	1	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	4+	4+	4+
21	Electronic Support Measure (ESM) Utilization	4+	4+	4+
22	Data Link Utilization	4+	4+	4+
23	Surface Search	4+	4+	4+
24	Battle Space Management	3+	3+	3+
25	Threat Recognition	4+	4+	4+
26	Strike Support	1	3+	3+
27	Search and Rescue	1	3+	3+
28	Off-Station/Turnover	1	4+	4+
30	Checklists	4+	4+	4+
33	Tactical Radio Procedures	4+	4+	4+
34	Parrot/India Checks	1	1	1
35	Air Control Unit (ACU) Check-In	1	1	1
36	Tactical Reports (TACREP)	1	1	1
37	Surface Contact Reports	1	1	1
38	Alpha Check	1	1	1
39	Air to Air Calls	1	1	1

MIF continued on next page.

FLEET OPERATIONS STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	OPS2101	OPS3106	OPS3290
40	Plain Voice Communications	1	1	1
41	Crew Resource Management (CRM)	4+	4+	4+
42	Mission Ownership	3+	4+	4+
43	Prioritization	3+	3+	3+
44	Scan	3+	4+	4+
45	Debrief		3+	3+

Blk #	Media	Title	Events	Hrs	Blk Name
OPS11	Class/Lab	Fleet Operations Simulator Preparation	2	6.5	FLTOPS PREP

1. Prerequisite. OPS0115 prior to OPS1101-2 (in order).

2. Events

OPS1101	MIL	Fleet Ops Simulator Preparation		4.0	
OPS1102	Lab/SS	Fleet Ops Self-Study		2.5	

3. Syllabus Notes. OPS1102 is a formally scheduled student study period that does not require an instructor be assigned.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	H/X
OPS21	MCS	Fleet Operations CPT	1	1.5	1.5

1. Prerequisite. OPS1102 prior to OPS2101.

2. Syllabus Notes

a. OPS2101 shall not be scheduled on the same day as OPS1101.

b. Students will begin the event airborne.

c. Due to the material being covered during these events, there is no brief or debrief required. Additionally, due to the unique design of the MCS device, a single instructor may conduct up to two like student CPT events simultaneously, if scheduled in the same training suite, e.g., two OPS2101 events conducted in seat 1-1 and 1-2.

3. Special Syllabus Requirements. None.

4. Discuss Items. None.

5. Block MIF

CTS REF	MANEUVER	OPS2101
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	4+
12	On-Station/Check-In Procedures	4+
13	On-Station Navigation	4+
14	Equipment Operation	4+
15	Radar Utilization	4+

MIF continued on next page.

CTS REF	MANEUVER	OPS2101
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	4+
21	Electronic Support Measure (ESM) Utilization	4+
22	Data Link Utilization	4+
23	Surface Search	4+
24	Battle Space Management	3+
25	Threat Recognition	4+
26	Strike Support	1
27	Search and Rescue	1
28	Off-Station/Turnover	1
30	Checklists	4+
33	Tactical Radio Procedures	4+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check-In	1
36	Tactical Reports (TACREP)	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1
41	Crew Resource Management (CRM)	4+
42	Mission Ownership	3+
43	Prioritization	3+
44	Scan	3+

Blk #	Media	Title	Events	Hrs	H/X
OPS31	MCS	Fleet Operations	6	9.0	1.5

1. Prerequisite. OPS2101.
2. Syllabus Notes
 - a. OPS3101 shall not be scheduled on the same day as OPS2101.
 - b. Students will begin the event airborne.
3. Special Syllabus Requirements. None.
4. Discuss Items

OPS3101
Card of the Day.

OPS3102
CWC Doctrine and Structure, and SSC.

OPS3103
Surveillance Area, Critical Identification and Engagement Area, and Vital Area.

OPS3104
SAR Operations.

OPS3105
National and international airspace, and maritime query challenge.

OPS3106
MEZ, JEZ, and FEZ.

5. Block MIF

CTS REF	MANEUVER	OPS3106
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	4+
8	Brief	4+
12	On-Station/Check-In Procedures	4+
13	On-Station Navigation	4+
14	Equipment Operation	4+
15	Radar Utilization	4+
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1
20	Electro-Optical (EO)/Infrared (IR) Utilization	4+
21	Electronic Support Measure (ESM) Utilization	4+
22	Data Link Utilization	4+
23	Surface Search	4+
24	Battle Space Management	3+
25	Threat Recognition	4+
26	Strike Support	3+
27	Search and Rescue	3+

MIF continued on next page.

CTS REF	MANEUVER	OPS3106
28	Off-Station/Turnover	4+
30	Checklists	4+
33	Tactical Radio Procedures	4+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check-In	1
36	Tactical Reports (TACREP)	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1
41	Crew Resource Management (CRM)	4+
42	Mission Ownership	4+
43	Prioritization	3+
44	Scan	4+
45	Debrief	3+

Blk #	Media	Title	Events	Hrs	H/X
OPS32	MCS	Fleet Operations Check Flight	1	1.5	1.5

1. Prerequisite. OPS3106 prior to OPS3290.
2. Syllabus Notes. Students will begin the event airborne.
3. Special Syllabus Requirements. None.
4. Discuss Items. Any previous discuss item in this phase.
5. Block MIF

CTS REF	MANEUVER	OPS3290
1	General Knowledge/Procedures	4+
2	Emergency Procedures (EP)	4+
3	Headwork/Situational Awareness (SA)	4+
4	Basic Air Work Recognition	4+
5	System Knowledge	4+
7	Mission Planning (Operations)	4+
8	Brief	4+
12	On-Station/Check-In Procedures	4+
13	On-Station Navigation	4+
14	Equipment Operation	4+
15	Radar Utilization	4+
16	Surveillance Radar Utilization	1
17	Synthetic Aperture Radar Utilization	1
18	Inverse Synthetic Aperture Radar (ISAR) Utilization	1
19	Identification Friend or Foe (IFF) Utilization	1

MIF continued on next page.

CTS REF	MANEUVER	OPS3290
20	Electro-Optical (EO)/Infrared (IR) Utilization	4+
21	Electronic Support Measure (ESM) Utilization	4+
22	Data Link Utilization	4+
23	Surface Search	4+
24	Battle Space Management	3+
25	Threat Recognition	4+
26	Strike Support	3+
27	Search and Rescue	3+
28	Off-Station/Turnover	4+
30	Checklists	4+
33	Tactical Radio Procedures	4+
34	Parrot/India Checks	1
35	Air Control Unit (ACU) Check-In	1
36	Tactical Reports (TACREP)	1
37	Surface Contact Reports	1
38	Alpha Check	1
39	Air to Air Calls	1
40	Plain Voice Communications	1
41	Crew Resource Management (CRM)	4+
42	Mission Ownership	4+
43	Prioritization	3+
44	Scan	4+
45	Debrief	3+

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Chapter IX

Course Training Standards

1. Purpose. These standards outline the tasks and proficiency required of SNFOs during the Intermediate MC2 NFOTS phase.
2. Student Duties and Responsibilities
 - a. Plan the mission.
 - b. Ensure the MCS is inspected and configured for the assigned mission.
 - c. Operate the MCS to accomplish the mission using sound judgment and mission ownership.
3. General Standards
 - a. “Standard” equates to *good* (G/4).
 - b. Momentary deviations outside CTS that do not compromise flight safety are acceptable if subsequent corrections are timely.
 - c. Procedural knowledge and application must comply with applicable directives and allow efficient mission accomplishment.
4. Execution. The MIF regulates student progression to meet required standards prior to phase completion. Instructors shall evaluate student performance against these standards.
5. Job Tasks. Specific performance and standards required are described as follows:

BEHAVIOR STATEMENT	STANDARDS
Graded Item	
● A brief description of the behavior, required action, and/or conditions.	● The specific standards for the action. May be read as “The SNFO...”

6. Graded Items. The MIF for specific graded items varies for each stage. Several items are graded on all complete syllabus events. The standards for these universally graded items are listed first followed by the Course Training Standards unique to each stage.

7. Course Training Standards

BEHAVIOR STATEMENT	STANDARDS
1. General Knowledge/Procedures	
<ul style="list-style-type: none"> ● Maintain working knowledge of all appropriate flight training instructions and directives. 	<ul style="list-style-type: none"> ● Recites, discusses, and/or performs all applicable items essential to the operation of the aircraft and completion of the mission.
2. Emergency Procedures (EP)	
<ul style="list-style-type: none"> ● Maintain in-depth knowledge of all MCS Student Guide emergency procedures. ● Utilize the checklist IAW MCS Student Guide and FTI guidelines. 	<ul style="list-style-type: none"> ● Recognizes the status of an immediate action item within one minute. ● Performs and/or recites critical action steps from memory with 100 percent accuracy. ● Correctly prioritizes tasks to include aviate, navigate, communicate, and checklists during simulated abnormal conditions. ● Uses correct checklist to complete procedures when conditions permit. ● Proactively responds to compound emergencies and engages in discussion with crewmembers to achieve a resolution. ● Identifies nearest suitable landing field during emergency procedures.
3. Headwork/Situational Awareness (SA)	
<ul style="list-style-type: none"> ● Comply with the FTI and MCS Operating Manual while maintaining SA IAW safety-of-flight and mission objectives. 	<ul style="list-style-type: none"> ● Follows instructions and demonstrations and understands explanations. ● Foresees and avoids possible difficulties by making recommendations that enhance the situation and/or overall mission effectiveness. ● Remains alert and spatially oriented during all phases of the event. ● Maintains overall awareness with regard to air traffic in vicinity of own ship and dynamic weather conditions.

BEHAVIOR STATEMENT	STANDARDS
4. Basic Air Work Recognition	
<ul style="list-style-type: none"> Recognize and direct desired altitude, airspeed, and heading and note deviations. 	<ul style="list-style-type: none"> Monitors aircraft within ± 100 feet of assigned or directed altitude. Monitors aircraft within ± 10 knots of assigned or directed airspeed. Monitors aircraft within $\pm 5^\circ$ of assigned or directed heading. Recognizes deviations within 30 seconds and immediately directs corrections upon recognition. Makes required altitude calls per the FTI.
5. System Knowledge	
<ul style="list-style-type: none"> Comply with the FTI and MCS Student Guide while maintaining a working knowledge of directives. 	<ul style="list-style-type: none"> Describes the correct nomenclature, purpose, characteristics, functions, and limitations of MCS systems without error.
6. Mission Planning (Transit)	
<ul style="list-style-type: none"> Performs transit mission planning with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> Interprets a weather brief to determine if the mission is feasible, legal, and safe. Completes a Flight Plan without error. Completes jet log without error. Reviews and correctly interprets FLIP documents and other applicable flight information to determine if the mission is feasible, legal, and safe. Has all proper in-flight publications and charts for the specified mission. Plans an alternate destination based on estimated fuel requirements and observed and forecasted meteorological conditions. Plans alternate course of action.
7. Mission Planning (Operations)	
<ul style="list-style-type: none"> Performs operational mission planning with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> Identifies appropriate message traffic to properly plan the mission. Clearly defines the mission overview and mission goals utilizing the appropriate message traffic and mission tasking brief. Plots all points from the ACO and OpOrd Maritime (standoffs, CVOAs, CAP points, bullseyes, tracks, etc.) on the tactical charts without error.

BEHAVIOR STATEMENT	STANDARDS
	<ul style="list-style-type: none"> ● Calculates Start fuel, On-Station fuel, Bingo fuel, and Recovery fuel for the mission. ● Briefs Start fuel, On-Station fuel, Bingo fuel, and Recovery fuel, as appropriate.
8. Brief	
<ul style="list-style-type: none"> ● Performs a proper mission brief. 	<ul style="list-style-type: none"> ● Is thoroughly prepared for the brief and as applicable, briefs the mission to include specific mission objectives, flight conduct, and contingency planning. ● Conducts an accurate mission and safety brief given a standard mission briefing guide. ● Has all appropriate charts and publications available during the brief. ● Displays appropriate IFR en route charts or tactical charts during the brief. ● Avoids distracting habits and use of filler words or phrases while briefing. ● Interacts with instructors and other crewmembers in a professional manner.
9. Ground Operations	
<ul style="list-style-type: none"> ● Performs and/or directs all ground procedure requirements. 	<ul style="list-style-type: none"> ● Performs initialization and ground mission requirements within 10 minutes of start. ● Prepares the tactical display and flight instruments
10. Departure	
<ul style="list-style-type: none"> ● Monitors the proper IFR procedures while safely navigating the aircraft during the departure stage of flight. 	<ul style="list-style-type: none"> ● Monitors compliance with departure procedures and ATC instructions. ● Monitors headings and issues corrections to maintain IFR course $\pm 5^\circ$. ● Executes the off-deck call with base or tactical authority.

BEHAVIOR STATEMENT	STANDARDS
11. En route Procedures	
<ul style="list-style-type: none"> ● Performs the correct IFR procedures while safely navigating the aircraft during the en route stage of flight. 	<ul style="list-style-type: none"> ● Makes appropriate recommendations for en route flight plan changes given direction of flight, weather, and mission requirements. ● Navigates to turn points within ± 3 NM. ● Maintains course within $\pm 5^\circ$ or 3 NM (whichever is less) while radial tracking. ● Maintains course centerline between all NAVAIDs and turn points. ● Changes NAVAID and CDI course at the proper switchover point while on an IFR airway. ● Leads turns when required. ● Determines wind direction and speed within $\pm 30^\circ$ and ± 10 knots. ● Determines groundspeed within ± 20 knots. ● Determines ETA to each turn point to within ± 1 minute of ATA. ● Performs Two Minutes Prior, Mark on Top, and Wings Level calls per the FTI and Student Guide/MCS Operating Manual.
12. On-Station/Check-In Procedures	
<ul style="list-style-type: none"> ● Directs and/ or performs on-station and check-in procedures during ingress to the operational area with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> ● Activates mission sensors IAW the mission tasking brief. ● Directs and/or performs proper ingress procedures IAW the mission tasking brief. ● Correctly assesses mission equipment status in accordance with the FTI and Student Guide/MCS Operating Manual. ● Communicates with the controlling authority IAW checklists and mission tasking brief. ● Directs and/or performs mission tasking updates received from the controlling authority.
13. On-Station Navigation	
<ul style="list-style-type: none"> ● Directs/performs on-station navigation with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> ● Maintains aircraft inside surface search operating area. ● Maintains the assigned altitude block. ● Maintains safe distance from standoffs to include land, weapons, and ships.

BEHAVIOR STATEMENT	STANDARDS
14. Equipment Operation	
<ul style="list-style-type: none"> ● Directs and/or performs equipment operations with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> ● Correctly describes theory of operation and function of the TACAN, INS, GPS, FMS, flight instruments, and computer display in accordance with the FTI and Student Guide/MCS Operating Manual. ● Correctly operates all functions of the TACAN, INS, GPS, FMS, flight instruments, and computer display in accordance with the FTI and Student Guide and MCS Operating Manual. ● Correctly configures the EHSI and FMS for the mission. ● Enters a usable navaid in the TACAN and a usable navaid or waypoint in the FMS for the entire mission. ● Selects TACAN or FMS sourcing for the CDI as appropriate to navigate along the assigned route or track. ● Monitors the status of the TACAN and acknowledges degradations within five (5) minutes of the malfunction. ● Troubleshoots all TACAN malfunctions. ● Monitors the status of the GPS and acknowledges degradations within five (5) minutes of the malfunction. ● Troubleshoots all GPS malfunctions. ● Monitors the status of the INS and acknowledges degradations within five (5) minutes of the malfunction. ● Troubleshoots all INS malfunctions. ● Monitors the status of the ICS and radios and acknowledges degradations within five (5) minutes of the malfunction. ● Correctly and expeditiously builds tac aids as required.

BEHAVIOR STATEMENT	STANDARDS
15. Radar Utilization	
<ul style="list-style-type: none"> ● Directs and/or performs radar operations with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> ● Correctly describes theory of operation and function of the radar and IFF Interrogator and Transponder in accordance with the FTI and Student Guide and MCS Operating Manual. ● Correctly operates all functions of the radar equipment in accordance with the FTI and Student Guide and MCS Operating Manual. ● Utilizes the proper radar horizon to allow for an effective radar plot. ● Correctly operates the air/ground radar equipment to determine ground features in accordance with the FTI and Student Guide and MCS Operating Manual. ● Correctly operates the air/ground radar equipment to identify, assess, and avoid weather hazards in accordance with the FTI and Student Guide and MCS Operating Manual. ● Correctly operates the radar equipment to effectively plot and classify/identify surface contacts in accordance with the FTI and Student Guide and MCS Operating Manual. ● Monitors the status of the radar and acknowledges sensor degradations within five (5) minutes of the malfunction while using the radar. ● Correctly operates all functions of the IFF Interrogator and Transponder in accordance with the FTI and Student Guide and MCS Operating Manual. ● Correctly operates the IFF Interrogator to effectively plot and identify contacts in accordance with the FTI and Student Guide and MCS Operating Manual. ● Monitors the status of the IFF Interrogator and Transponder and acknowledges sensor degradations within five (5) minutes of the malfunction. ● Troubleshoots all radar malfunctions.

BEHAVIOR STATEMENT	STANDARDS
16. Surveillance Radar Utilization	
<ul style="list-style-type: none"> ● Directs and/or performs radar operation in Air mode, Ground mode, or Air/Ground mode to build the tactical picture of the operating area. 	<ul style="list-style-type: none"> ● Selects Air mode, Ground mode, or Air/Ground mode as appropriate to build the tactical picture of the operating area. ● Adjusts range, tilt, gain, and brightness to build the tactical picture of the operating area. ● Selects the radar overlay for the PPI without prompting. ● Recognizes and avoids hazardous weather systems based on radar returns. ● Returns the radar to surveillance mode and selects the radar overlay for the PPI within 30 seconds of completion of SAR or ISAR modes. ● Recognizes degradations within five (5) minutes.
17. Synthetic Aperture Radar Utilization	
<ul style="list-style-type: none"> ● Directs/performs radar operation in Spot SAR or Strip SAR mode to obtain imaging of the assigned location. 	<ul style="list-style-type: none"> ● Positions the aircraft and adjusts airspeed to get within Spot or Strip SAR parameters in accordance with the FTI and Student Guide and MCS Operating Manual. ● Enters the latitude, longitude, and elevation of the assigned location in accordance with the FTI and Student Guide and MCS Operating Manual. ● Gets images of the assigned location in two (2) or more resolutions and takes snapshots of each resolution.
18. Inverse Synthetic Aperture Radar (ISAR) Utilization	
<ul style="list-style-type: none"> ● Directs/performs radar operation in ISAR mode to obtain imaging of the assigned contact. 	<ul style="list-style-type: none"> ● Positions the aircraft and adjusts airspeed to get within ISAR parameters in accordance with the FTI and Student Guide and MCS Operating Manual. ● Verifies ISAR is slewed to the correct contact. ● Utilizes ISAR images to correctly classify contacts without error. ● Identifies ISAR degradations within five (5) minutes.

BEHAVIOR STATEMENT	STANDARDS
19. Identification Friend or Foe (IFF) Utilization	
<ul style="list-style-type: none"> ● Directs and/or performs IFF transponder usage. ● Directs and/or performs IFF interrogator usage. 	<ul style="list-style-type: none"> ● Activates the appropriate transponder modes and enters the appropriate code for each mode. ● Activates the IFF interrogator into TX MOM or TX CONT as appropriate during setup. ● Correctly identifies friendlies based on Mode 1 and/or Mode 2 codes based on the appropriate theater documents. ● Correctly identifies neutrals using the commercial air profile requirements based on the appropriate theater documents. ● Identifies IFF transponder degradations within five (5) minutes. ● Identifies IFF interrogator degradations within five (5) minutes.
20. Electro-Optical (EO)/Infrared (IR) Utilization	
<ul style="list-style-type: none"> ● Directs and/or performs EO/IR operations with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> ● Correctly describes theory of operation and function of the EO/IR equipment in accordance with the FTI and Student Guide and MCS Operating Manual. ● Takes at least one snapshot of each enemy contact/site, COI, or CCOI that is seen on EO/IR. ● Correctly operates the EO/IR equipment to determine static and dynamic contacts in accordance with the FTI and Student Guide and MCS Operating Manual. ● Monitors the status of the EO/IR equipment and acknowledges sensor degradations within five (5) minutes of the malfunction. ● Troubleshoots all EO/IR equipment malfunctions in accordance with the FTI and Student Guide and MCS Operating Manual. ● Verifies EO/IR point marker location prior to changing a track designation or making a voice report for the contact.

BEHAVIOR STATEMENT	STANDARDS
21. Electronic Support Measure (ESM) Utilization	
<ul style="list-style-type: none"> • Directs and/or performs ESM operations with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> • Correctly describes theory of operation and function of the ESM equipment in accordance with the FTI and Student Guide and MCS Operating Manual. • Correctly operates all functions of the ESM equipment in accordance with the FTI and Student Guide and MCS Operating Manual. • Operates the ESM equipment to evaluate the emitter type and determine the contact/point of origin in accordance with the FTI and Student Guide and MCS Operating Manual. • Correlates threat emitters with the correct threat platform without error. • Clears the ESM gutter within five (5) minutes of ACU check-in. • Monitors the status of the ESM equipment and acknowledges sensor degradations within five (5) minutes of the malfunction. • Troubleshoots all ESM equipment malfunctions.
22. Data Link Utilization	
<ul style="list-style-type: none"> • Directs and/or performs data link operations with the aid of checklists, appropriate messages, and mission tasking brief. 	<ul style="list-style-type: none"> • Correctly describes theory of operation and function of the data link equipment in accordance with the FTI and Student Guide/MCS Operating Manual. • Correctly inputs the data link parameters for net entry. • Correctly configures the J Voice nets A and/or B in accordance with the mission brief. • Operates the data link equipment to transmit and/or receive sensor contacts. • Inserts sensor contacts into the data link within five minutes of request. • Monitors status of the data link and acknowledges sensor degradations within five (5) minutes of the malfunction. • Troubleshoots all data link malfunctions. • Does not report any PEND (pending) affiliation tracks into the data link.

BEHAVIOR STATEMENT	STANDARDS
23. Surface Search	
<ul style="list-style-type: none"> ● Directs and/or performs surface search procedures upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization. 	<ul style="list-style-type: none"> ● Classifies and identifies surface contacts utilizing sensors available. ● Correctly classifies and identifies at least 80% of surface contacts in the assigned search or operating area and makes voice or data link reports for 100% of classified/assigned contacts. ● Makes voice reports for surface contacts as directed during check-in. ● Reports unusual or suspicious surface traffic IAW the mission tasking brief within five (5) minutes of the incident.
24. Battle Space Management	
<ul style="list-style-type: none"> ● Directs and/or performs battle space management procedures upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization. 	<ul style="list-style-type: none"> ● Correctly analyzes the tactical situation. ● Demonstrates effective time management that allows for mission completion, appropriate mission reports to be passed, and turnover and checkout to be completed prior to FINEX. ● Maintains positional awareness with friendly assets. ● Executes proper Rules of Engagement (ROE) procedures. ● Utilizes friendly assets within respective capabilities.
25. Threat Recognition	
<ul style="list-style-type: none"> ● Performs threat recognition upon arriving on-station with the aid of mission tasking brief and sensor utilization. 	<ul style="list-style-type: none"> ● Visually identifies all theater threat, neutral, and other platforms without error.
26. Strike Support	
<ul style="list-style-type: none"> ● Directs and/or performs strike support procedures. 	<ul style="list-style-type: none"> ● Determines threats and associated parameters. ● Directs friendly assets when appropriate to respond to imminent threat. ● Makes or relays the inflight report or misrep within five (5) minutes of completion of the strike.

BEHAVIOR STATEMENT	STANDARDS
27. Search and Rescue	
<ul style="list-style-type: none"> • Directs and/or performs Search and Rescue procedures with the aid of checklists, mission tasking brief, and sensor utilization. 	<ul style="list-style-type: none"> • Determines the best known position of the missing entity utilizing all available information to include parachute drift if applicable. • Determines the proper search altitude based on the type of missing asset, environment, and the best sensor available. • Determines the proper search pattern based on the missing asset information and environment. • Directs search assets to the scene. • Optimizes search sensors of all participating units. • Executes appropriate Search and Rescue reports when required. • Coordinates with the appropriate agency to aid in the search and rescue effort. • Completes all appropriate items of the SAR On Scene Commander checklist.
28. Off-Station/Turnover	
<ul style="list-style-type: none"> • Directs and/or performs off-station and turnover procedures during egress from the operations area with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> • Directs and/or performs proper egress procedures IAW the mission tasking brief. • Communicates with the controlling authority and passes turnover to the relieving unit (if applicable) IAW checklists and mission-tasking brief.
29. Approach	
<ul style="list-style-type: none"> • Monitors the aircraft, as needed, to properly comply with the published procedures of an approach. 	<ul style="list-style-type: none"> • Complies with published approach procedures and controller instructions; efficiently makes use of all onboard navigational equipment to maximize SA. • Briefs missed approach or climb out instructions prior to MAP or DA. • Conducts appropriate CRM with flight station.
30. Checklists	
<ul style="list-style-type: none"> • Completes mission specific checklists. 	<ul style="list-style-type: none"> • Correctly and expeditiously performs all required checklists IAW the MCS Student Guide and FTI.

BEHAVIOR STATEMENT	STANDARDS
31. Fuel Management/Analysis	
<ul style="list-style-type: none"> ● Maintain fuel awareness throughout the planning, brief, and mission execution. 	<ul style="list-style-type: none"> ● Calculates Start fuel, On Station fuel, Bingo fuel, and Recovery fuel, as appropriate, to within 1000 pounds of instructor's calculation. Briefs Start fuel, On Station fuel, Bingo fuel, and Recovery fuel, as appropriate. ● Conducts a cruise check every 15-20 minutes. ● Monitors fuel state and directs deviations if needed to accomplish mission and land with adequate fuel reserve. ● Uses groundspeed to update estimated fuel at on-station entry point or IAF within 500 pounds of instructor's calculation. ● Analyzes actual fuel state and correctly states any trend in fuel consumption.
32. ATC Radio Procedures	
<ul style="list-style-type: none"> ● Communicates/performs with standard terminology IAW directives from the AIM/FAR/ICAO and FTI. ● Performs ATC radio procedures at the MCS crew station and directs via the use of V/UHF/HF radios and ICS. 	<ul style="list-style-type: none"> ● Responds correctly to 90 percent or more of ATC incoming calls. ● Correctly configures the ICS, VHF, UHF, HF, and SATCOM radios in accordance with the FTI, Student Guide, and mission brief. ● Communicates clearly and concisely with appropriate agencies using standard military and ICAO terminology. ● Makes timely transmissions without blocking other radio calls. ● Performs no radio (NORDO) procedures, as required. ● Recognizes radio degradations within five (5) minutes and troubleshoots. ● Uses the correct call sign.

BEHAVIOR STATEMENT	STANDARDS
33. Tactical Radio Procedures	
<ul style="list-style-type: none"> ● Communicates/performs with standard terminology IAW the unclassified tactical aid, checklists, and FTL. ● Performs tactical radio procedures at the MCS crew station and directs via the use of V/UHF/HF/SATCOM/J-Voice radios and ICS. 	<ul style="list-style-type: none"> ● Responds correctly to 90 percent or more of tactical incoming calls. ● Correctly configures the ICS, VHF, UHF, HF, and SATCOM radios in accordance with the FTL, Student Guide, and mission brief. ● Acknowledges all communications. ● Communicates clearly and concisely with appropriate tactical unit using standard tactical radio procedures. ● Makes timely transmissions without blocking other radio calls. ● Communicates using standard terminology and brevity. ● Communicates precise formatted radio transmissions when applicable. ● Communicates properly during secure radio transmissions. ● Executes operations normal report, as required. ● Recognizes radio degradations within (five) 5 minutes and troubleshoots. ● Uses the correct call sign.
34. Parrot/India Checks	
<ul style="list-style-type: none"> ● Performs Parrot/India checks per the Training Aid. 	<ul style="list-style-type: none"> ● Contacts Redcrown or Greencrown for Parrot-India checks 100-75nm from the CSG, or upon completion of setup, whichever comes first. ● Uses the correct call sign. ● Correctly passes aircraft position from the CVN. ● Follows the format in the Training Aid. ● Uses standard brevity terms and phrases as appropriate. ● Avoids extra words and pauses while passing reports.

BEHAVIOR STATEMENT	STANDARDS
35. Air Control Unit (ACU) Check-In	
<ul style="list-style-type: none"> ● Performs ACU check in per the Training Aid. 	<ul style="list-style-type: none"> ● Contacts the designated ACU after Parrot-India checks. ● Uses the correct call sign. ● Correctly passes aircraft position from the CVN. ● Follows the format in the Training Aid. ● Correctly passes time on station to the ACU in accordance with the FTI and Student Guide and MCS Operating Manual. ● Identifies and properly passes alibis to the ACU. ● Uses the correct abbreviated check in format when switched to a new ACU. ● Uses standard brevity terms and phrases as appropriate. ● Avoids extra words and pauses while passing reports.
36. Tactical Reports (TACREP)	
<ul style="list-style-type: none"> ● Passes TACREPs per the format in the Training Aid. 	<ul style="list-style-type: none"> ● Uses the correct call sign. ● Passes TACREPs within two minutes of enemy emitter activity reaching 100% certainty on the ESM subsystem control page. ● TACREPs are all “Echo” reports. ● Properly numbers all TACREPs. ● Each TACREP includes the TACREP number, emitter name, and bearing from ownship. ● Uses standard brevity terms and phrases as appropriate. ● Avoids extra words and pauses while passing reports.

BEHAVIOR STATEMENT	STANDARDS
37. Surface Contact Reports	
<ul style="list-style-type: none"> ● Passes surface contact reports per the format in the Training Aid. 	<ul style="list-style-type: none"> ● Uses the correct call sign. ● Passes surface contact reports within five (5) minutes. ● Surface contact reports follow the format in the Training Aid. ● Uses the appropriate confidence level for reports. ● Uses standard brevity terms and phrases as appropriate. ● Avoids extra words and pauses while passing reports.
38. Alpha Check	
<ul style="list-style-type: none"> ● Conducts an Alpha Check with the ACU during check-in. 	<ul style="list-style-type: none"> ● Uses the correct call sign. ● Correctly reports ownship position from the established bullseye point in accordance with the FTI and Student Guide and MCS Operating Manual. ● Recognizes errors between ACU and ownship reported position. ● Uses standard brevity terms and phrases as appropriate. ● Avoids extra words and pauses while passing reports.
39. Air to Air Calls	
<ul style="list-style-type: none"> ● Passes air to air broadcast calls to friendly fighters. ● Passes air to air tactical calls to friendly fighters. 	<ul style="list-style-type: none"> ● Uses the correct call sign for both ownship and fighters. ● Uses broadcast or tactical calls as appropriate. ● Correctly passes the bearing, range, altitude, and direction of travel for broadcast calls in accordance with the FTI and Student Guide and MCS Operating Manual. ● Correctly passes the bearing, range, altitude, and aspect for tactical calls in accordance with the FTI and Student Guide and MCS Operating Manual. ● Uses standard brevity terms and phrases as appropriate. ● Avoids extra words and pauses while passing reports.

BEHAVIOR STATEMENT	STANDARDS
40. Plain Voice Communications	
<ul style="list-style-type: none">● Correctly communicates in plain voice when secure voice and/or J Voice is not available.	<ul style="list-style-type: none">● Uses the correct call sign.● Does not compromise any code words or other information.● Correctly encodes using RAMROD in accordance with the FTI and Student Guide and MCS Operating Manual.● Correctly encodes using base numbers in accordance with the FTI and Student Guide and MCS Operating Manual.● Correctly uses bullseye to pass positions in accordance with the FTI and Student Guide and MCS Operating Manual.● Uses standard brevity terms and phrases as appropriate.● Avoids extra words and pauses while passing reports.

BEHAVIOR STATEMENT	STANDARDS
41. Crew Resource Management (CRM)	
<ul style="list-style-type: none"> ● Demonstrates the use of all CRM skills to effectively employ all resources, information, and knowledge to guide the crew to the successful achievement of all tasks during the planning, briefing, execution, and debriefing of the mission. 	<ul style="list-style-type: none"> ● Formulates short-term, long-term, and contingency plans during all phases of the mission. ● Demonstrates the proper level of assertiveness for the situation and accepts assertive behavior from other crewmembers. ● Chooses a course of action using logical and sound judgment based on the available information. ● Provides positive leadership to the crew; encourages crew participation in the decision making process. ● Communicates with brevity to crewmembers and outside agencies. Facilitates effective, open, and clear internal communications; uses exact verbiage and phraseology IAW the FTI, Student Guide and MCS Operating Manual, and ALSA Brevity Manual. ● Demonstrates both leadership and crew member skills. ● Adapts to meet new situational demands. Maintains constructive behavior under pressure. Adapts to internal and external environmental changes. ● Improves mission effectiveness by minimizing crew preventable errors. ● Uses appropriate interaction between crewmembers with regard to normal aircraft procedures. ● Uses SA building communications with crewmembers and outside agencies. ● Uses directive communications before descriptive communications.

BEHAVIOR STATEMENT	STANDARDS
42. Mission Ownership	
<ul style="list-style-type: none"> ● Takes charge of the mission in all aspects of planning and execution. ● Exhibits aviation leadership. 	<ul style="list-style-type: none"> ● Leads planning, briefing and execution of the mission. ● Confidently influences aircrew to work in a coordinated effort toward successful task completion within the parameters of the mission objectives. ● Determines actionable solutions to potential problems articulating proactive alternatives and/or courses of action. ● Takes command of mission execution and provides reasonable alternatives to mission plan due to evolving and dynamic circumstances.
43. Prioritization	
<ul style="list-style-type: none"> ● Manages task loading in the proper order of precedence per FTI recommended minimum requirements. 	<ul style="list-style-type: none"> ● Effectively prioritizes task loading in descending order of importance (e.g., aviate, navigate, communicate, and checklists).
44. Scan	
<ul style="list-style-type: none"> ● Exhibits proper recognition of system and flight instrumentation. ● Exhibits proper tactical scan to enhance situational awareness. 	<ul style="list-style-type: none"> ● Recognizes any abnormal system indications within five (5) minutes. ● Utilizes the TACPLOT display to recognize any changes to the tactical situation.

BEHAVIOR STATEMENT	STANDARDS
45. Debrief	
<ul style="list-style-type: none">● Performs a proper debrief.	<ul style="list-style-type: none">● If appropriate, reports unusual deviations, potential hazardous conditions, or unusual operations to controlling authority.● Conducts an accurate mission debrief given a standard mission debriefing guide.● Reports status of mission objectives.● Updates threat intelligence, on-station weather, status of friendly forces, command and control issues, BDA, and navigation with controlling authority.● Reconstructs mission for lessons- learned purposes.● Is receptive to constructive feedback, taking responsibility for student errors, and discusses proactive measures to improve performance.● Recalls specifics of the mission and is able to accurately assess aircrew performance.

Chapter X

Master Materials List

1. Individually Issued Materials

<u>NOMENCLATURE</u>	<u>IDENTIFICATION</u>	<u>QTY PER STUDENT</u>
a. Intermediate MC2 NFOTS Master Curriculum Guide	CNATRAINST 1542.180A	1
b. Flight Training Instructions	CNATRA P-Pubs	various

2. Major Training Device. 2B51 Multi-Crew Simulator quantity controlled by Naval Air Warfare Center Training Systems Division (NAVAIRWARCENTRASYSYSDIV), Training Material Management Division, Inventory Control Branch (Code 5204).

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