

NAVAL AIR TRAINING COMMAND



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CHIEF OF NAVAL AIR TRAINING



ADVANCED MARITIME PATROL AND RECONNAISSANCE NAVAL FLIGHT OFFICER TRAINING SYSTEM (NFOTS) CURRICULUM

2020



DEPARTMENT OF THE NAVY
CHIEF OF NAVAL AIR TRAINING
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CNATRA INSTRUCTION 1542.182

From: Chief of Naval Air Training

Subj: ADVANCED MARITIME PATROL AND RECONNAISSANCE NAVAL FLIGHT
OFFICER SYSTEM CURRICULUM

1. Purpose. To publish curriculum for training Undergraduate Naval Flight Officers (NFOs) in the Advanced phase of Naval Air Training Command (NATRACOM) flight Training.
2. Cancellation. CNATRAINST 1542.171 CH-1 will be cancelled when the last student enrolled completes the curriculum.
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 January 2012.
5. Review and Effective Date. Per OPNAVINST 5215.17A, CNATRA N7 will review this instruction annually on 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 automatically expire 10 years after effective date unless reissued or canceled prior to the 10-year anniversary date, or an extension has been granted.
6. Forms. The CNATRA forms required by this instruction are automated in the Training Learning Management System (T/LMS) computer program. Additional copies of CNATRA forms are available on the CNATRA website <https://www.cnatra.navy.mil/pubs/forms.htm>.

A handwritten signature in black ink, appearing to read "Scott Starkey", is positioned above the name "S. B. STARKEY".

S. B. STARKEY

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 Website, <https://www.cnatra.navy.mil/pubs-instructions.asp>.

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COURSE DATA

1. Course Title. Advanced Maritime Patrol and Reconnaissance Naval Flight Officer Training System (NFOTS) Curriculum.
2. Course ID Number (CIN). Advanced MPR NFOTS, Q-2D-0182.
3. Location. Naval Air Station (NAS) Pensacola.
4. Course Status. Active.
5. Course Mission. The mission of Advanced Maritime Patrol and Reconnaissance (MPR) Naval Flight Officer Training System (NFOTS) training is to qualify student Naval Flight Officer (NFO) graduates for follow-on Fleet Replacement Squadron (FRS) flight training. The Advanced MPR NFOTS curriculum gives students the skills necessary to succeed in their career as MPR Naval Flight Officers and at the successful completion of this syllabus, the student will be designated a Naval Flight Officer.
6. Prerequisite Training. Successful completion of Primary NFOTS Training (Q-9B-0020) and Intermediate MC2 NFOTS Training (Q-2D-0180).
7. Security Clearance Requirements. None.
8. Follow-on Training. Assigned by the graduate's parent service.
9. Course Length. Overall time-to-train is calculated in accordance with CNATRAINST 1550.6F. Training Days account directly or provide margin for factors including personnel and equipment availability, briefing and preparation time, and historical delays. Calendar Weeks further account for weekends, holidays, safety stand-downs, and other expected non-working days.

	<u>Training Days</u>	<u>Calendar Weeks</u>
Advanced MPR NFOTS	39.0	8.7

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. Chief of Naval Air Training (CNATRA).
14. Quota Control. CNO.
15. Course Training Subjects
 - a. Ground Training

ADMINISTRATION		
Stage	Symbol	Hours
Advanced MPR NFOTS Check-in and Checkout	ADM0101-2	5.0
Totals		5.0

GROUND TRAINING		
Stage	Symbol	Hours
Surface Search and Littoral Surveillance (SSLS)	P0101-16	23.0
SSLS Exam and Critique	P0117-18	1.5
Electronic Warfare and Acoustic Operations (EWAO)	P0201-10	17.0
EWAO Exam and Critique	P0211-12	1.5
Maritime Patrol and Reconnaissance (MPR)	P0301-5	9.0
MPR Exam and Critique	P0306-7	1.5
Totals		53.5

- b. Simulator Support

FLIGHT SUPPORT		
Stage	Symbol	Hours
SSLS Flight Support	P1101-5	13.5
EWAO Flight Support	P1201-5	22.0
MPR Flight Support	P1301-6	26.0
Totals		61.5*

Note: Simulator Support totals include 4.5* hours accomplished as Event Rehearsal time in the MCS. These hours are also included on the Simulator Training table.

c. Simulator Training

SIMULATOR TRAINING			
Events	Symbol	MCS	
		Flts	Hrs
SSLS Event Rehearsal	P1103	1	1.5
EWAO Event Rehearsal	P1202	1	1.5
MPR Event Rehearsal	P1303	1	1.5
SSLS	P3101-8	8	12.0
EW	P3201-2	2	3.0
AO	P3301-3	3	4.5
MPR	P3401-3	3	9.0
MPR Check Flight	P3590	1	3.0
Totals		20	36.0

Note: Event Rehearsals are formally scheduled events which will be accomplished in the MCS with an INFO assigned.

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 Student Naval Flight Officer (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/Learning Manager Management System (T/LMS) and accounted for on the flight schedule, per the following table:

ADDITIONAL FORMAL TRAINING TIME PER CURRICULUM HOUR/EVENT			
Training Area	Brief	Debrief	Total
MPR Simulator Events: All Others (INFO)	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 Assisted Instruction (CAI), 2B51 Multi-Crew Simulator (MCS), and self- and group-paced study.
20. Preceding Curriculum Data. None.
21. Student Performance Measurement/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 1500.4J, Chapter 6, for further guidance.

ABBREVIATIONS

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

ADMIN	Administration
AIS	Automatic Identification System
AN	Ambient Noise
AO	Acoustic Operations
ASI	Aviation Student Indoctrination
ASUW	Anti-Surface Warfare
ASW	Anti-Submarine Warfare
ATF	Aviation Training Form
ATJ	Aviation Training Jacket
BHA	Battle Hit Assessment
BT	Bathothermal
CAI	Computer-Assisted Instruction
CCOI	Critical Contact of Interest
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
CPA	Closest Point of Approach
CRM	Crew Resource Management
CTS	Course Training Standard(s)
DATUM	Last Known Position or Reference Location

DICASS	Directional Command-Activated Sonobuoy System
DIFAR	Directional Frequency Analysis and Recording
DOR	Drop On Request
DR	Dead Reckoning
EO	Electro-Optical
EOB	End of Block
EP	Emergency Procedure
ER	Event Rehearsal
ES	Electronic Support
ESM	Electronic Support Measure
ET	Extra Training
EW	Electronic Warfare
EWAO	Electronic Warfare and Acoustic Operations
FMS	Flight Management System
FRS	Fleet Replacement Squadron
FTI	Flight Training Instruction
GPS	Global Positioning System
HAASW	High Altitude Anti-Submarine Warfare
HF	High Frequency
H/X	Hours per Event
IADS	Integrated Air Defense System
IAW	In Accordance With
ICS	Intercommunication System
IFF	Identification Friend or Foe
INFO	Instructor Naval Flight Officer
INS	Inertial Navigation System

IPC	Initial Progress Check
IR	Infrared
ISAR	Inverse Synthetic Aperture Radar
LECT	Lecture
LKP	Last Known Position
MAC	Multi-Static Active Coherent
MC2	Maritime Command and Control
MCG	Master Curriculum Guide
MCS	Multi-Crew Simulator
MESA	Minimum Enroute Safe Altitude
MIF	Maneuver Item File
MIL	Mediated Interactive Lecture
MOSA	Minimum Operational Safe Altitude
MPR	Maritime Patrol and Reconnaissance
MSA	Minimum Safe Altitude
N/A	Not Applicable
NAVAID	Navigational Aid
NFO	Naval Flight Officer
NFOTS	Naval Flight Officer Training System
NG	No Grade
NLT	No Later Than
NM	Nautical Miles
NSS	Naval Standard Score
OLQ	Officer-Like Qualities
OPS	Operations
OPSO	Operations Officer

PAS	Phase Aggregate Score
PD	Pulse Duration
PRF	Pulse Repetition Frequency
Radar	Radio Detection and Ranging
ROE	Rules of Engagement
RRU	Ready Room Unsatisfactory
SA	Situational Awareness
SAC	Systems Accuracy Check or Scene of Action Commander (ASW)
SAG	Surface Action Group
SATCOM	Satellite Communications
Sim	Simulator
SITREP	Situation Report
SNFO	Student NFO
SOP	Standard Operating Procedure
SOSUS	Sound Surveillance System
SS	Self-Study
SSC	Surface Surveillance Coordination
SSLs	Surface Search and Littoral Surveillance
SSR	Special Syllabus Requirement
SURPIC	Surface Picture
SURTASS	Surveillance Towed-Array Sensor System
TACAN	Tactical Air Navigation
TACREP	Tactical Report
TACTAS	Tactical Towed-Array System
TRAWING	Training Air Wing
TRB	Training Review Board

TTO	Training Time Out
UNSAT	Unsatisfactory
V/UHF	Very/Ultra High Frequency
WSM	Water Space Management
XO	Executive Officer

GLOSSARY

1. Advancing X. Completed event within the normal syllabus flow. Excludes events with last characters in the range 84-89 unless specified by CNATRAINST 1500.4J.
2. Aviation Training Form (ATF). Any 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. ATJs are 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 a block.
5. Blue 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 (PXX90). A check event in any stage of training.
7. Class Advisor. An INFO assigned to each class as mentor and advisor to monitor student progress, assist when difficulties arise, and instill the Naval Aviation culture.
8. Commanding Officer Progress Check (CO-PC) (PXX89). 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 define the behavior associated with each maneuver and standards or tolerances recommended for successful stage completion. 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 1542.182.
13. Drop on Request (DOR). The self-initiated termination of training. Anytime a student makes a statement such as "I quit" or "DOR," they 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 student 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. Event Rehearsal (ER). A hard scheduled flight support simulator event designed to prepare the student for the next block of simulator training. This event may be scheduled as student only, or it may require the addition of an IOS operator to assist the student in using the training device. This requirement will be specified for each event.
18. Extra Training (ET) (PXX87). Extra training may be authorized by the squadron Commanding Officer to allow for correction of a training deficiency, or skillset deficiency.
19. Flight Training Instruction (FTI). Training publications that define maneuvers and acceptable performance standards for each maneuver the student is expected to perform. Each FTI covers one or more stages of instruction.
20. Hours per Event (H/X). The resourced duration for each event, rounded to the nearest tenth of an hour.
21. Initial Progress Check (PXX88). A special check given by an experienced instructor (senior O-3 or above) as designated in writing by the CO. A satisfactory IPC returns the student to normal syllabus flow. An IPC can count as a progressing event at the CO's discretion. An UNSAT IPC results in a CO-PC.
22. 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 for further information.

Char	Meaning	Remarks
1 st - 3 rd	Stage	ADM - Administration P - Advanced MPR
4 nd	Media	0 - Ground Event 1 - Academics 2 - CPT 3 - Simulator 4 - Aircraft
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 Sim 86 - Warmup 87 - Extra Training 88 - Initial Progress Check 89 - Final Progress Check 90 - Check Flight

23. 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.
24. Maneuver Item File (MIF). A chart listing the required maneuvers and associated proficiency levels for a particular block of flight training.
25. Master Curriculum Guide (MCG). A publication tailored to a specific phase of training.
26. Phase of Training. The chief subdivisions of a course. MPR NFO training is comprised of Primary, Intermediate MC2, and Advanced MPR NFOTS phases of training.
27. Pink ATF. A standard ATF that is printed on pink paper. The pink ATF is used to denote an UNSAT event.
28. Progress Check (PXX88/PXX89). A student check event within a given stage of training administered by an experienced instructor IAW the CNATRAINST 1500.4J.
29. Progress Check Instructor. An INFO authorized by the CO to administer Initial or Command Directed Progress Checks.
30. Ready Room Unsatisfactory (RRU). An UNSAT grade given for inadequate knowledge of flight procedures, systems, discuss items, emergency procedures, or deficient preflight planning or failure of a non-academic examination (e.g., NATOPS quiz/exam). Missing a brief does not constitute an RRU and shall be documented on a supplemental ATF. Refer to CNATRAINST 1500.4J, Ch. 6 for further information on missed briefs.

31. Self-Study Events (SS). A hard scheduled flight support ground 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.
32. Special Syllabus Requirement (SSR). One-time, ungraded demonstration item(s).
33. Stage. A subdivision of a phase, comprised of events leading to a single set of objectives, designated by a common symbol (e.g., Radio Instruments, Carrier Qualification). Refer to CNATRAINST 1550.6F, Appendix D, for further information.
34. Standard Operating Procedure (SOP). An instruction or directive that provides guidance on TRAWING or squadron operating rules for local aircraft.
35. Training Media. NFOTS Advanced MC2 media include simulator (2B51), simulator support and ground training. Simulator support lectures may consist of MILs, off-line lectures (LECT), CAI lessons, and exams. The second character in the lesson identifier designates the training media. Refer to CNATRAINST 1550.6F for further information.
36. Training Review Board (TRB). A fact-finding board appointed to conduct an administrative review of training following a failed CO-PC. Refer to CNATRAINST 1500.4J for further information.
37. 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 Instructor may call a TTO.
38. Warmup Event(s) (PXX86). Additional event(s) given to allow a student to regain a level of proficiency previously demonstrated which has diminished due to a non-syllabus break in training.

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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 CNATRAINST 1550.6F.

e. Execution. All students execute associated pipeline events in Chapters II through VIII.

f. Syllabus Description. Advanced MPR NFOTS events are executed in the 2B51 Multi-Crew Simulator (MCS), training platform and divided into stages. Stages are grouped by similar flight training regimes such as Familiarization and Navigation. Each stage may be subdivided into training blocks. If so, the training blocks 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

(1) Phase Aggregate Score (PAS). PAS is a comparative ranking based on the NFS's performance on a group of events compared against that of a previous population of completers for the same set of events.

(2) Naval Standard Score (NSS). A representation of any score relative to the average score. The scale is artificially centered at 50 (that is, 50 is average). Each NSS is a whole number and the scale is truncated at 20 and 80.

(3) NFOTS SNFO Calculations. Refer to the CNATRAINST 1500.4J for SNFO PAS and NSS calculations.

2. Training Management

a. Syllabus Progression

(1) Other than noted exceptions, syllabus events shall be flown sequentially within each stage. Blocks shall not be started without all prerequisites completed. Students must complete all events in their assigned phase unless enrolled in an approved accelerated syllabus.

(2) Flowchart on page I-5 is a depiction of NFOTS Advanced MPR NFOTS course flow and 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 event in stage must be completed within 14 calendar days of the associated simulator event support lecture. The associated simulator event 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).

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

c. 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 to flight events, as simulator events should be conducted for the entire syllabus event H/X stated in the respective MCG. Refer to CNATRAINST 1500.4J, section 605, for further clarification.

d. Location of Training. Due to the unique nature of Advanced MPR NFOTS training, student events shall be accomplished at home station.

e. Special Syllabus Requirements. Unless noted otherwise, instructors may accomplish SSRs on any event within the block. Annotate which 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 Reviews. The Class Advisor (CA) shall conduct jacket reviews IAW CNATRAINST 1500.4J.

3. Unsatisfactory (UNSAT) Performance. All training shall be suspended following an UNSAT event, except as addressed or authorized per this MCG.

a. Event Progression. Following an UNSAT event, if a PC is not required, that event shall be repeated until the NFS satisfactorily passes the event.

b. Remediation. Remediation of unsatisfactory performance may be specifically tailored to address deficient skillsets.

c. Ready Room UNSAT (RRU). A missed brief does not constitute a RRU. Missed briefs shall be documented on a Supplementary ATF and counseling or discipline shall be administered as directed by the squadron CO. RRU is defined as either of the following:

(1) A NFS is inadequately prepared for the scheduled event. The RRU always trigger a Progress Check, so they shall always be documented on a pink version of the event's ATF. The event will be marked as incomplete with a U/2 grade in the appropriate graded item column, (e.g., General Knowledge, Procedures, etc.). Upon successful completion of the Progress Check, the original RRU event shall be flown as a take two (or greater) to complete all remaining, or appropriate items, graded as a normal event.

(2) The NFS fails a nonacademic examination (e.g., NATOPS quiz).

d. Academic. An academic examination failure is UNSAT and counts towards PC triggers.

e. Simulator UNSAT. A simulator UNSAT may be awarded anytime following the successful completion of an event brief; RRUs may not be awarded after this point. Unsatisfactory performance for simulator events is defined in CNATRAINST1500.4J, Chapter 7.

4. Training Review Board. The TRAWING Commander shall conduct a TRB on all NFSs recommended for attrition. Refer to the CNATRAINST 1500.4J for additional information and guidance.

5. Training Delays and Warmup Events Within Stage

A Warmup (WU, PXX86) event is given to regain flight proficiency due to a training delay. Eligibility is based on the number of days since the last stage syllabus event, in the simulator. WU criteria are normally based on last event in stage because MPTS/MNTS is built on increasing levels of skill attainment between blocks or stand-alone events. Every WU event shall ensure required skills for that stage are refreshed. All Warmup events shall be coded as a PXX86 (e.g., P3186). Refer to CNATRAINST 1500.4J for Warmup event guidelines.

a. Optional WUs shall be scheduled and flown as the next event. If performance warrants a WU, it shall be re-coded as the last completed event.

b. Mandatory WUs shall be scheduled and flown as the last completed event or as directed by the Commanding Officer. The event shall be coded as a WU (PXX86).

c. Individual maneuver grades on WU events will not count toward calculation of NFS stage and phase grades. WU events are however eligible for overall event UNSAT if a significant incident not related to the stage discontinuity occurred.

d. If the break in training occurs between two simulator events, a mandatory WU shall be flown and coded as the last completed event.

e. The instructor shall document on the ATF the reason and circumstances for awarding the WU event.

f. Check events (PXX90) are considered part of the stage for which they are checking for WU purposes.

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

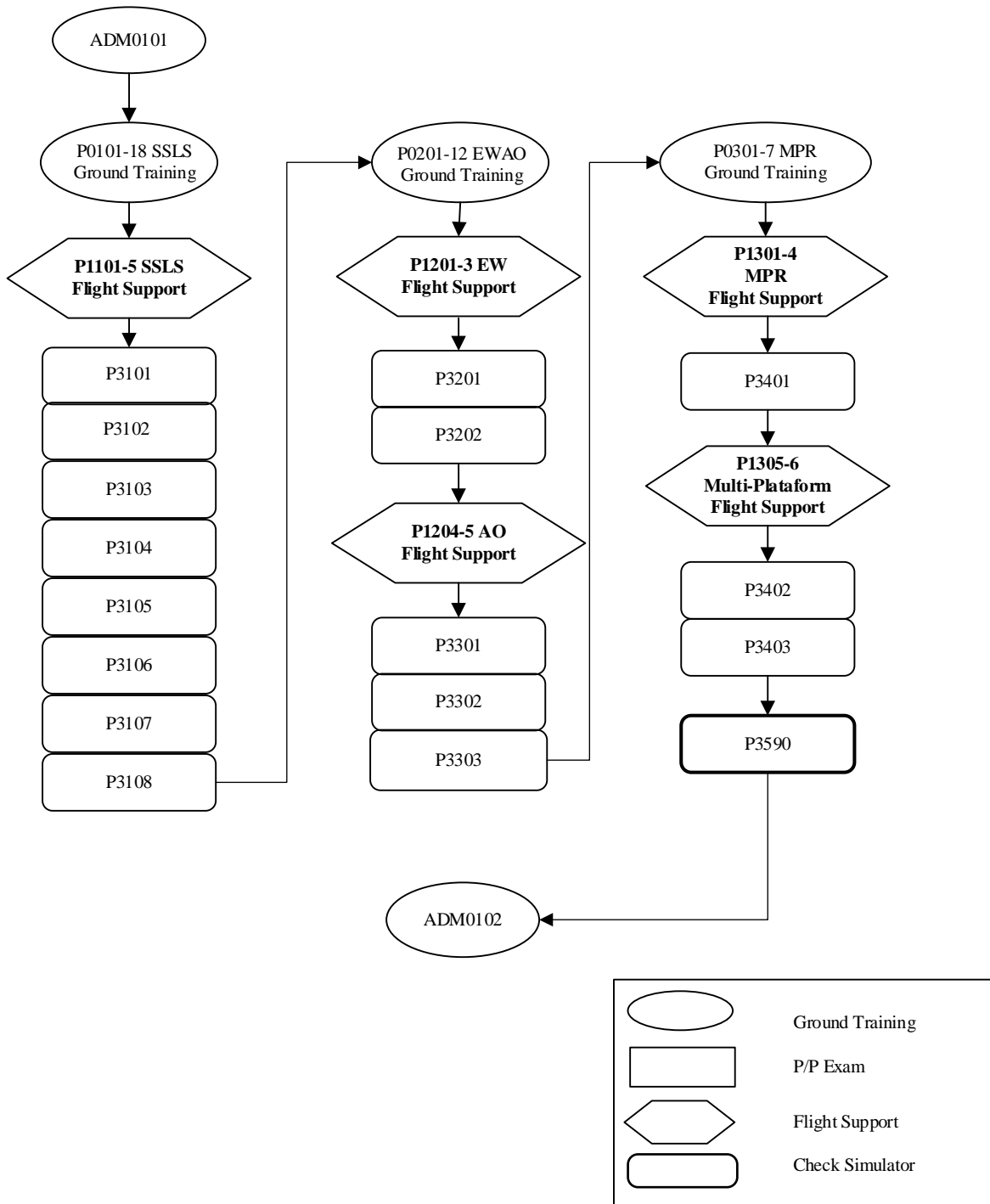
CRITERIA FOR AWARDED WARMUP EVENTS IN STAGE		
BREAKS*(DAYS)	WARMUP EVENTS	REMARKS
7-13 All Others	1 Optional or 1 Mandatory (if Required)	–Optional WU is based on performance and is required if overall grade is UNSAT. –WU is prohibited if demonstrated performance is sufficient, or will be sufficient within remaining block events, by EOB. –Mandatory Warmup is required if NFS has flown less than the sum of 11.0 simulator plus aircraft hours during the last 30 days.**
14-30 All Others	1 Mandatory 1 Optional	–Mandatory WU is not an advancing event. –Optional WU is based on performance and is required if overall grade is UNSAT. –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 or flight event in stage).

h. Training Delays and Warmups Between Stages. WUs are intended for non-curriculum breaks in training. Each curriculum is designed to allow sufficient time for academics, simulators, and flights. First events in stage following ground training are designed and graded with the delay factored in and normally do not require a WU.

i. Between stages, a mandatory WU is required if 14 to 30 days have elapsed since any curriculum event.

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j. All WU events between stages shall be recorded on an ATF, and will include all required and relevant information to record the conduct and performance of that WU event.

k. Extended Training Delays. If the period between events is greater than 30 days, the squadron CO shall determine an appropriate WU training plan to regain NFS proficiency. Refer to the CNATRINST 1500.4J for further guidance.

6. Additional Simulators. Extra Training (ET) Events (PXX87): 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 CNATRINST 1500.4J for ET event guidelines.

7. 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 flight or simulator event with:

(a) A thorough knowledge of:

1. The Discuss Items, as listed in Chapters II-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 NFS'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/effect analysis, particularly with respect to the CTS.

(b) The mission's complexity and student's progress will govern the time required for debrief, not to exceed one hour. 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 NFS's next event IAW CNATRAINST 1500.4J.

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. Grade the student's overall EP knowledge and performance under EPs.

8. Mission Grading Procedures and Evaluation Policies

a. General Grading and Evaluation Policy. MIFs listed are minimum block completion standards per maneuver. Students who consistently perform at the absolute minimum standard through multiple blocks of training may not possess the skills required to complete follow-on training. MIF is designed to allow for minimum performance in a specific area, with the understanding that performance in other areas above the minimum MIF, will offset the weak area.

b. Grading Procedures

(1) Absolute Maneuver Grading. The following scale shall be used to document NFS performance on maneuvers attempted during each event. This is an absolute grading scale. It shall be interpreted and used by instructors the same way for all items on all events. NFS performance as referred to in the scale below should be judged only against the CTS provided for a given item in the MCG.

(a) Demonstrated (NG/1 Level). Enter "No Grade (NG)":

1. When the instructor demonstrates the maneuver and the student does not subsequently perform it during the event.

2. To indicate accomplishing all SSRs for that block or event. Also specify completed SSRs in the ATF's maneuver item content line and document date of exposure via the SSR button on the ATF menu bar.

(b) Unable (U/2 Level). Performance is unsafe or lacks sufficient knowledge, skill, or ability. Deviations greatly exceed CTS, significantly disrupting performance. Corrections significantly lag deviations or aggravate the deviation.

(c) Fair (F/3 Level). Performance is safe, but with limited proficiency. Deviations exceed CTS tolerances, detracting from performance. Corrections noticeably lag deviations, and may not be appropriate.

(d) Good (G/4 Level). Performance meets or positively exceeds CTS. Deviations outside CTS tolerances are brief, minor, and do not affect safety of flight. Corrections are appropriate and timely.

(e) Excellent (E/5 Level). Surpasses CTS. Performance is correct, efficient, and skillful. Deviations are very minor. Corrections, if required, are initiated by the NFS and are appropriate, smooth, and timely.

(2) Overall Event Grades. Overall event grades represent the student's progression through the syllabus. Every training event shall be marked Pass or Unsatisfactory (UNSAT). Use the following definitions to characterize event grades. See ***Awarding Overall Event Grades*** for specific rules defining UNSAT performance.

(a) Pass

1. Prior to EOB: level of performance is generally adequate to meet or exceed levels of expected performance by EOB necessary to continue training.

2. EOB: NFS performance meets or exceeds performance necessary to continue to the next block, stage, or phase training.

(b) UNSAT. NFS exhibits dangerous tendencies or progress toward meeting EOB standards is insufficient. An overall UNSAT is at the instructor's discretion. It should be noted that an event may be graded UNSAT without any individual maneuvers graded U/2. UNSAT events that do not result in an IPC or CO-PC shall be printed on pink paper; UNSAT Progress Checks and UNSAT events that result in a Progress Check shall also be printed on pink paper. If the NFS receives an UNSAT on any event, to include PXX86 or PXX87, the ATF shall be printed on pink paper. If an overall UNSAT grade is awarded on any event other than normal syllabus flow events, the instructor shall clearly state the justification in the General Comments section of the ATF.

Any UNSAT event, starting with failed academics exams in API, through the final event prior to designations as a Naval Flight Officer, shall cumulatively be used in Progress Check triggers.

(3) Overall Event Grades. Overall event grades represent NFS progression through the curriculum. Every training event shall be marked Pass or Unsatisfactory (UNSAT).

(a) Prior to EOB. Level of performance is generally adequate to meet or exceed levels of expected performance by EOB necessary to continue training.

(b) EOB MIF Performance. NFS performance meets or exceeds performance necessary to continue to the next block, stage, or phase training. If the student has previously met MIF in the block, he or she must still meet MIF in the EOB event if the maneuver is reattempted.

(c) MIF Performance Maintenance. Students shall maintain or exceed MIF performance from one block to the next within stage or between media within stage, except as noted below or when MIF on a subsequent block is below the preceding block MIF.

(4) Maneuver Requirements. For each block:

(a) Mandatory Items. Items with a number and a plus sign (+) are mandatory and the student must meet the required proficiency by EOB. When a maneuver is performed multiple times in a block of training, the last grade assigned for the maneuver will determine if the student meets EOB MIF.

(b) Demonstration Items. Items with the number 1, but without a plus (+), are demonstration items. If one or more is flown within a block, the NFS must meet the preparation and knowledge requirements to safely attempt the item; NFSs may receive a U/2 for a Demonstration item if they are not adequately prepared for, or do not have the requisite knowledge to perform the item.

(5) Complete and Incomplete Events.

(a) An event may both complete a previous event and count as an advancing event.

(b) For events flown exclusively to clear an incomplete, grades on maneuvers repeated from the incomplete event do not count toward the student's score, except where the grade assigned for the repeated item is lower than the lowest grade previously assigned on that item from all previous attempts at that event.

(c) Simulator Event Completion. Assess a simulator event complete if the student has received the full training period per the MCG. If required, the simulator event may be conducted for a time period greater than that stated in the MCG. If the actual simulator sortie length is greater than stated H/X by more than 0.3 hours, the instructor shall annotate the reason in the ATF's General Comments section. The simulator event shall not be conducted for a time less than stated in the MCG, unless it is completing a previously incomplete event.

c. Policies for Evaluation Flights and Ground Evaluations

(1) Authorized Evaluators. The CO shall designate check event instructors for each stage.

(2) Check Event (PXX90)

(a) Check events are single-event training blocks. Therefore, all expectations regarding progressing out of a block apply, except:

1. NFS should fly a cross section of Demonstration items (NG/1) after all (+) graded items are adequately performed.

2. The NFS should be able to demonstrate required levels of proficiency without instructor assistance. However, instruction is allowed on check events and NFSs may re-attempt maneuvers at the instructor's discretion. If the flight profile was incomplete because too much time was dedicated to re-attempting maneuvers, or too much event time utilized for additional training, the item should be graded "U/2" and the flight should be graded UNSAT/incomplete.

3. The entire event duration should be devoted to assessing NFS skill attainment, ability, and readiness to progress to the next block of training. All required maneuvers must be completed to MIF.

(3) Incomplete Check Event

(a) A check event shall be graded as incomplete when:

1. Any (+) graded item was not flown, or

2. The instructor was unable to observe sufficient examples of a given maneuver to assess overall NFS performance. If the flight profile is incomplete because too much time was dedicated to re-attempting maneuvers, or excessive additional training was required, overall event grade should be UNSAT/Incomplete.

3. The subsequent completion flight need only include maneuvers required to complete the check event.

4. Exceptions. The check event is complete and the overall grade is UNSAT if:

a. Any graded item is below expected performance levels needed to succeed in follow-on training, or

b. Any NG/1 item was not adequately prepared for, or required item knowledge was insufficient resulting in a grade of U/2 for the Demonstration item, or

(b) The instructor determines inadequate performance was demonstrated on any item, or items, that will not predicate successful follow-on normal course flow training.

(4) Progress Check Procedures

(a) Progress checks conducted in the simulator are holistic reviews of a NFS's proficiency, judgment, air sense, and overall ability to complete the mission. 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 the CNATRAINST 1500.4J for further guidance and requirements.

(b) IPC. The following defines when to conduct an IPC, and IPC outcomes.

1. IPC Triggers:

a. Two consecutive UNSATs.

b. Three cumulative UNSATs in NATRACOM.

c. An UNSAT check event (PXX90).

d. A Ready Room UNSAT (RRU).

e. At the discretion of the OPSO or CO when there is doubt regarding the student's potential to successfully complete training within one programmed TTT.

2. IPC outcomes:

a. Pass. Returns the student to normal syllabus flow. This will normally return the student to the event that triggered the IPC.

b. Fail. Results in a CO-PC.

(c) CO-PC. The following defines when to conduct a CO-PC and CO-PC outcomes.

1. CO-PC triggers:

- a. Failure of an IPC.
- b. In any case where a student has undergone an IPC in phase and subsequently meets any of the IPC triggers listed above.
- c. Two academic examination failures in a phase.
- d. Four cumulative UNSATs in a phase, starting with API academics.
- e. At the discretion of the CO when there is doubt regarding the student's potential to successfully complete training within one programmed TTT.

2. CO-PC outcomes:

- a. Pass. Returns the NFS to normal syllabus flow. This will normally return the NFS to the event that triggered the CO-PC. The CO-PC may be considered an advancing event if the CO prescribed that course of action during the post-UNSAT CO's review.
- b. Fail. AN UNSAT CO-PC results in an attrition recommendation to the TRAWING Commander and a TRB.

..... (d) Progress Check Counseling

(1) Prior to an IPC (PXX88). The NFS's Class Advisor (CA), Student Control Officer, or Operations Officer (OPSO) shall counsel the NFS on the IPC process and document counseling on a Supplementary ATF. CO's guidance, ET authorization, and intent to count the PC as an Advancing X shall be included on the Supplementary ATF.

(2) Upon completion of an IPC. The IPC INFO shall counsel the NFS on the IPC results, recommendations, and future courses of action. The IPC INFO should also strive to ensure the NFS is coping with the IPC process appropriately, and notify appropriate squadron leadership immediately if there are any concerns. Post-IPC counseling shall be documented on the IPC (PXX88) ATF.

(3) Prior to a Commanding Officer Progress Check (CO-PC) (PXX89). The CO shall counsel the NFS on the CO-PC process. This counseling, including ET authorization and intent to count the CO-PC as an advancing event, shall be documented on the CO-PC (PXX89) ATF. If the CO is not the CO-PC instructor, the CO shall document counseling on a Supplementary ATF.

(4) Upon completion of a CO-PC. The CO-PC Instructor shall counsel the NFS and document on the (PXX89) ATF. Counseling should consist of the CO-PC results, attrition or

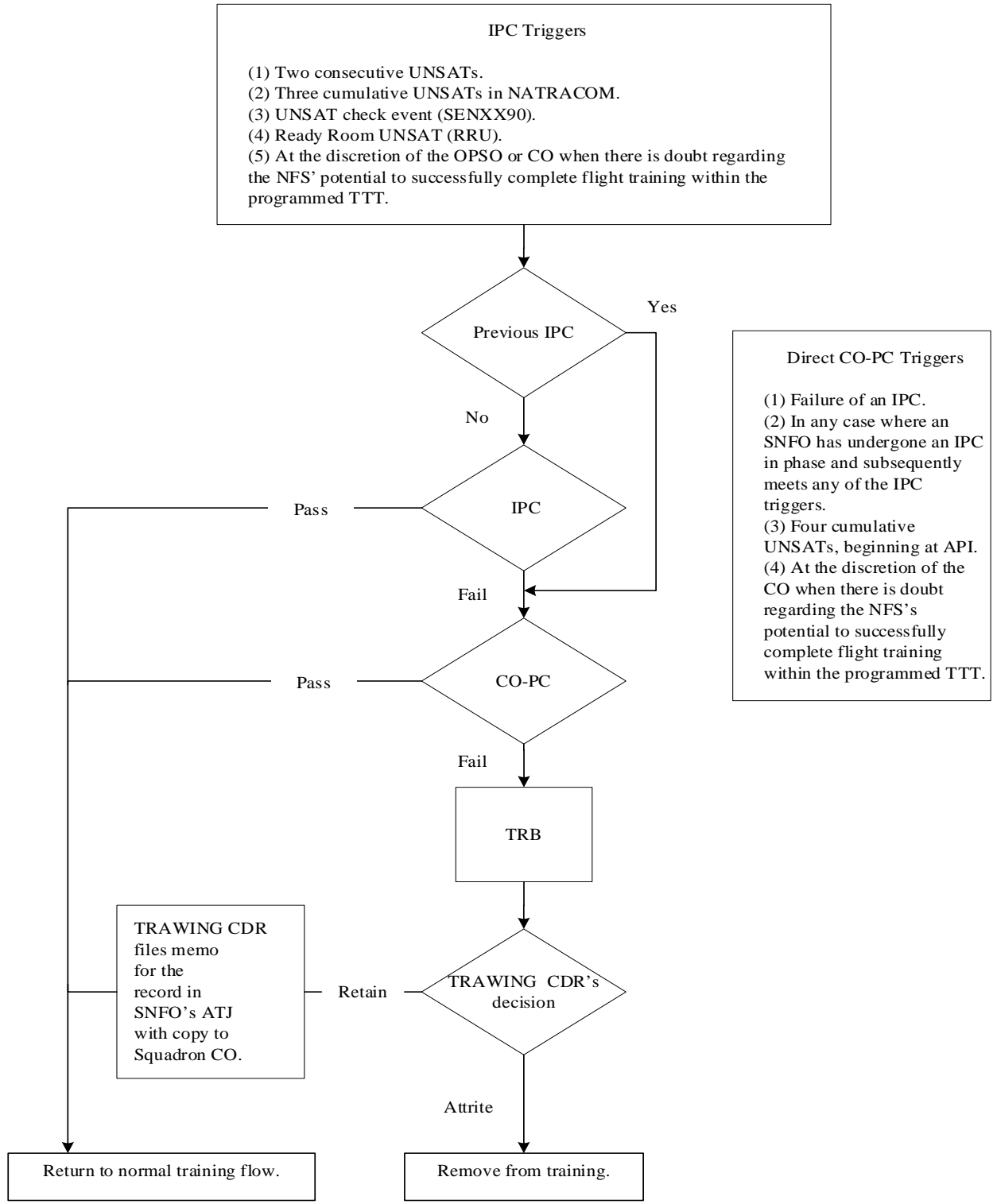
retention recommendations, and future courses of action. The CO-PC Instructor should also strive to ensure the NFS is coping with the CO-PC process appropriately, and notify appropriate squadron leadership immediately if there are any concerns. If the CO was not the CO-PC instructor, the CO shall counsel the NFS and document counseling on a Supplementary ATF.

(5) An NFS being processed for an IPC or CO-PC and subsequently submits a Drop on Request (DOR) shall be processed as a DOR.

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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. The instructor shall ensure at least one hour is allocated between debrief and brief of back-to-back simulator events.

(3) Crew Day. The period 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 associated debrief) and his or her first scheduled event (including associated brief) of the following day. After six consecutive scheduled days, students shall receive 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 (NATOPS, FTIs, local SOPs, etc.) prior to commencing each stage of training.

c. Maneuver Demonstrations. Item demonstrations will be accomplished as required.

Chapter II

Ground Training

1. Use of Preflight Training Time. Hours are available during the ground stage and other stages associated with academic media to schedule briefings, device familiarization, learning center programs, study sessions, or any other activities that will enhance the student's training and preparation for Advanced MPR NFOTS. These hours may be used for academic training conducted early in each block; however, all prerequisites must be met.

Blk #	Media	Title	Events	Hrs	Blk Name
ADM01	Class	Administration	2	5.0	Admin

1. Prerequisites

a. Completion of Q-2D-0180, Intermediate MC2 NFOTS.

b. P3590 prior to ADM0102.

2. Events

ADM0101 Admin Advanced MPR NFOTS Check-in 2.5

ADM0102 Admin Advanced MPR NFOTS Checkout 2.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
P01	Class	Surface Search and Littoral Surveillance	18	24.5	SSLS

1. Prerequisites

- a. ADM0101 prior to P0101-10 (any order).
- b. P0111 prior to P0112-18 (in order).

2. Events

P0101	CAI	Comm and Nav Review		1.0	
P0102	CAI	Nav Publications, Charts, and Nav Content		1.0	
P0103	MIL	MPR Navigation		1.5	
P0104	MIL	Overwater Procedures		1.5	
P0105	CAI	The MPR Community and Mission Overview		1.0	
P0106	CAI	Automatic Identification System Theory		1.0	
P0107	CAI	ISAR and SAR Sensor Theory		1.0	
P0108	CAI	Surface Search Overview		1.3	
P0109	CAI	Surface Target Identification		1.4	
P0110	CAI	Littoral Surveillance Overview		1.3	
P0111	MIL	Surface Search Sensor Employment and Procedures		2.0	
P0112	MIL	Littoral Surveillance Sensor Employment and Procedures		2.0	
P0113	CAI	Datalink Review		1.0	
P0114	MIL	Mission Log Keeping		1.0	

2. Events (cont)

P0115	MIL	MPR CRM and Multitasking	2.0
P0116	MIL	SSLS Exam Review	3.0
P0117	CAI Test	SSLS Exam	1.0
P0118	LECT	SSLS Exam Remediation and Critique	0.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
P02	Class	Electronic Warfare and Acoustic Operations	12	18.5	EWAO

1. Prerequisite. P3108 prior to P0201-12 (in order).

2. Events

P0201	CAI	Introduction to EW		1.2	
P0202	CAI	Radar Principles and Application to EW		1.2	
P0203	CAI	Integrated Air Defense Systems		1.2	
P0204	MIL	EW Overview		2.0	
P0205	CAI	Oceanography		1.2	
P0206	CAI	Sonobuoy Overview		1.2	
P0207	MIL	Oceanography Overview		3.0	
P0208	CAI	Subsurface Target Identification Theory		1.0	
P0209	MIL	Acoustic Sensor Employment and Terminology		2.0	
P0210	MIL	EWAO Exam Review		3.0	
P0211	CAI Test	EWAO Exam		1.0	
P0212	LECT	EWAO Exam Remediation and Critique		0.5	

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
P03	Class	Maritime Patrol and Reconnaissance	7	10.5	MPR

1. Prerequisite. P3303 prior to P0301-7 (in order).

2. Events

P0301	CAI	MPR Coordinated Operations		1.0	
P0302	MIL	MPR Coordinated Operations Overview		3.0	
P0303	MIL	SSLS Review		1.0	
P0304	MIL	EWAO Review		1.0	
P0305	MIL	MPR Exam Review		3.0	
P0306	CAI Test	MPR Exam		1.0	
P0307	LECT	MPR Exam Remediation/Critique		0.5	

3. Syllabus Notes. None.

4. Discuss Items. None.

Chapter III

NATOPS Training

This chapter does not apply to Advanced MPR NFOTS phase of training.

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Chapter IV

Contact Training

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Chapter V

Instrument Training

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Chapter VI

Navigation Training

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Chapter VII

Formation Training

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Chapter VIII

Tactical Training

1. Seating. Student shall occupy a student MCS station.
2. Matrices. The following matrices are an overview of Advanced MPR NFOTS simulator training. 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. MPR Stage MIF

 Check Flight Event

MPR STAGE MANEUVER ITEM FILE						
CTS REF	MANEUVER	P3108	P3202	P3303	P3403	P3590
1	General Knowledge/Procedures	4+	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+	4+	4+
4	Basic Airwork Recognition	4+	4+	4+	4+	4+
5	System Knowledge	4+	4+	4+	4+	4+
6	Mission Planning	4+	4+	4+	4+	4+
7	Brief	4+	4+	4+	4+	4+
8	On-Station/Check-In-Procedures	4+	4+	4+	4+	4+
9	Radar Utilization	4+		4+	4+	4+
10	Electro-Optical/Infrared Utilization	4+	4+	4+	4+	4+
11	ESM Utilization	3+	4+	4+	4+	4+
12	Data Link Utilization	4+	4+	4+	4+	4+
13	Electronic Warfare	3+	4+		4+	4+
14	Battle Space Management	4+	4+	4+	4+	4+
15	Threat Recognition	3+	3+	3+	4+	4+

MIF continued on next page.

MPR STAGE MANEUVER ITEM FILE						
CTS REF	MANEUVER	P3108	P3202	P3303	P3403	P3590
16	Search and Rescue	3+			1	1
17	Off-Station/Turnover	3+	3+	4+	4+	4+
18	Checklists	4+	4+	4+	4+	4+
19	Tactical Radio Procedures	4+	4+	4+	4+	4+
20	Crew Resource Management	3+	3+	3+	4+	4+
21	Mission Ownership	3+	3+	3+	4+	4+
22	Prioritization	3+	3+	3+	4+	4+
23	Scan	4+	4+	4+	4+	4+
24	Operational Charts	4+	4+	4+	4+	4+
25	On-Station Navigation	4+	4+	4+	4+	4+
26	Terrain Avoidance/Standoffs	4+	4+	4+	4+	4+
27	Operational Record Keeping	3+	3+	3+	4+	4+
28	ISAR Utilization	4+			4+	4+
29	Surface Search	4+			4+	4+
30	SAR Utilization	4+			4+	4+
31	Littoral Surveillance	4+	4+		4+	4+
32	Signal Collection		4+		4+	4+
33	Acoustic Operations			4+	4+	4+
34	Coordinated Operations				4+	4+
35	Debrief	3+	3+	3+	4+	4+

Blk #	Media	Title	Events	Hrs	Blk Name
P11	Class/ MCS	Surface Search and Littoral Surveillance Flight Support	5	13.5	SSLS1

1. Prerequisites

- a. P0118 prior to P1101-2 (any order) and P1105.
- b. P1102 prior to P1103-4 (any order).

2. Events

P1101	CAI	MCS ISAR Identification	1.0
P1102	MIL	SSLS Flight Preparation	3.5
P1103	ER/ 2B51	SSLS Event Rehearsal	1.5
P1104	SS	SSLS Self-Study	6.5
P1105	MIL	Chart Preparation	1.0

3. Syllabus Notes. P1103 will be accomplished in the MCS with an INFO assigned.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
P12	Class/ MCS	Electronic Warfare and Acoustic Operations Flight Support	5	22.0	EWAO1

1. Prerequisites

- a. P0212 prior to P1201.
- b. P1201 prior to P1202-P1203 (any order).
- c. P3202 prior to P1204-P1205 (any order).

2. Events

P1201	MIL	EW Flight Preparation		4.0
P1202	ER/ MCS	EWAO Event Rehearsal		1.5
P1203	SS	EW Self-Study		6.5
P1204	MIL	AO Flight Preparation		3.5
P1205	SS	AO Self-Study		6.5

3. Syllabus Notes. P1202 will be accomplished in the MCS with an INFO assigned.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
P13	Class/ MCS	Maritime Patrol and Reconnaissance Flight Support	6	26.0	MPR1

1. Prerequisites

- a. P0307 prior to P1301.
- b. P1301 prior to P1302-4 (any order).
- c. P3401 prior to P1305-6 (in order).

2. Events

P1301	MIL	MPR Flight Preparation		3.5
P1302	Lab	MPR Flight Preparation Lab		4.5
P1303	ER/ 2B51	MPR Event Rehearsal		1.5
P1304	SS	MPR Self-Study		6.5
P1305	MIL	Multi-Platform Flight Preparation		3.5
P1306	SS	Multi-Platform Self-Study		6.5

- 3. Syllabus Notes. P1302 will be accomplished in the MCS with an INFO assigned.
- 4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	H/X
P31	MCS	Surface Search and Littoral Surveillance	8	12.0	1.5

1. Prerequisites. P1101-5.
2. Syllabus Notes
 - a. Students will begin the event just prior to on-station.
 - b. In addition to the scheduled instructor, a CIS is required to operate the MCS for each event. This additional CIS will not attend the brief or debrief.
3. Special Syllabus Requirements. None.
4. Discuss Items

P3101 - Surface Search 1

MSA/MESA/MOSA, Operational MPR SSC/RMP/MDA, review search sensors, determining primary search sensor, review COI and CCOI, upright sequence, Classifications (Poss, Prob, Cert, Non), and identification (hull number, name, flag).

P3102 - Surface Search 2

Due regard, Surface contact reporting (voice and data link), TACREPs, Racket/Trout reporting, and review Search and Rescue procedures.

P3103 - Surface Search 3

Radar Overt and Covert tactics, AIS utilization, ISAR operations, Data Link Utilization-Coordinated Operations, rigging procedures, ADC (Red, Green, Goldcrown) check-in procedures.

P3104 - Surface Search 4

Strait Transit, RMP, Littoral Operations, Black Line Navigation, territorial and threat standoff, Mandatory Reporting Points, Littoral Threats, Maritime Query and Challenge, and Right-of-Assistance Entry.

P3105 - Littoral Surveillance 1

SAR and order of battle, ISR Logs, Hard Deck, Feet Wet/Dry, Corridors, Overland Threats, Overland A/C Emergencies, Minimum Risk Routing, and MGRS.

P3106 - Littoral Surveillance 2

Intercept Procedures, Piracy, and Lost Communication Procedures.

P3107 - Littoral Surveillance 3

Hostile Act and Hostile Intent, Elements of Self-Defense, Necessity and Proportionality, Inherent Right of Self-Defense, and Collective Self-Defense.

P3108 - Littoral Surveillance 4

Any Previously Discussed Items.

5. Block MIF

CTS REF	MANEUVER	P3108
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Airwork Recognition	4+
5	System Knowledge	4+
6	Mission Planning	4+
7	Brief	4+
8	On-Station/Check-In Procedures	4+
9	Radar Utilization	4+
10	Electro-Optical/Infrared Utilization	4+
11	ESM Utilization	3+
12	Data Link Utilization	4+
13	Electronic Warfare	3+
14	Battle Space Management	4+
15	Threat Recognition	3+
16	Search and Rescue	3+
17	Off-Station/Turnover	3+
18	Checklists	4+
19	Tactical Radio Procedures	4+
20	Crew Resource Management	3+
21	Mission Ownership	3+

MIF continued on next page.

CTS REF	MANEUVER	P3108
22	Prioritization	3+
23	Scan	4+
24	Operational Charts	4+
25	On-Station Navigation	4+
26	Terrain Avoidance/Standoffs	4+
27	Operational Record Keeping	3+
28	ISAR Utilization	4+
29	Surface Search	4+
30	SAR Utilization	4+
31	Littoral Surveillance	4+
35	Debrief	3+

Blk #	Media	Title	Events	Hrs	H/X
P32	MCS	Electronic Warfare	2	3.0	1.5

1. Prerequisites. P1201-3.

2. Syllabus Notes.

a. Students will begin the event just prior to on-station.

b. In addition to the scheduled instructor, a CIS is required to operate the MCS for each event. This additional CIS will not attend the brief or debrief.

3. Special Syllabus Requirements. None.

4. Discuss Items

P3201 - Electronic Warfare 1

Electronic support, electronic protection, electronic attack, ES phases (search, intercept, locate, identify, report), AOP generation, TACREP reporting, Direction Finding, Ellipse Measurements, passive and active defenses, IADS structure, SAM engagement, and Brevity Code Words: Awake, Asleep, Color, Working, Tag, Empty, Lowdown, Music, Buzzer, Rotator, Retrograde (Slide, Scram), Vampire.

P3202 - Electronic Warfare 2

Continuous wave, pulse doppler, frequency modulation, stagger, jitter, dwell, switch, atmospheric conditions effect on radars and wave propagation, and radar modulation types (intrapulse, interpulse). PRF, PRI, PD, SIGINT (ELINT, COMINT, FISINT), and Function Codes (Fire Control, Target Acquisition, Target Tracker, Target Illuminator, Airborne Interceptor, Early Warning).

5. Block MIF

CTS REF	MANEUVER	P3202
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Airwork Recognition	4+

MIF continued on next page.

CTS REF	MANEUVER	P3202
5	System Knowledge	4+
6	Mission Planning	4+
7	Brief	4+
8	On-Station/Check-In Procedures	4+
10	Electro-Optical/Infrared Utilization	4+
11	ESM Utilization	4+
12	Data Link Utilization	4+
13	Electronic Warfare	4+
14	Battle Space Management	4+
15	Threat Recognition	3+
17	Off-Station/Turnover	3+
18	Checklists	4+
19	Tactical Radio Procedures	4+
20	Crew Resource Management	3+
21	Mission Ownership	3+
22	Prioritization	3+
23	Scan	4+
24	Operational Charts	4+
25	On-Station Navigation	4+
26	Terrain Avoidance/Standoffs	4+
27	Operational Record Keeping	3+
31	Littoral Surveillance	4+
32	Signal Collection	4+
35	Debrief	3+

Blk #	Media	Title	Events	Hrs	H/X
P33	MCS	Acoustic Operations	3	4.5	1.5

1. Prerequisites

- a. P3202
- b. P1204 - P1205 (in order).

2. Syllabus Notes

- a. Students will begin the event just prior to on-station.
- b. In addition to the scheduled instructor, a CI is required to operate the MCS for each event. This additional CI will not attend the brief or debrief.

3. Special Syllabus Requirements. None.

4. Discuss Items

P3301 - Acoustic Operations 1

ASW specific brevity words, BT sonobuoy, BT trace, AN processing, passive sonobuoys, sonobuoy deployment safety, sonobuoy drop timing, search patterns, localization patterns, CPA, Doppler tracking, and the 3-minute rule.

P3302 - Acoustic Operations 2

ASW Turnover, DIFAR/bearing tracking, generating a track, active sonobuoys, and DICASS/active tracking.

P3303 - Acoustic Operations 3

Coordinated ASW, SAC, Plans Red/Black, Time Late calculation.

5. Block MIF

CTS REF	MANEUVER	P3303
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Airwork Recognition	4+
5	System Knowledge	4+
6	Mission Planning	4+
7	Brief	4+
8	On-Station/Check-In Procedures	4+
9	Radar Utilization	4+
10	Electro-Optical/Infrared Utilization	4+
11	ESM Utilization	4+
12	Data Link Utilization	4+
14	Battle Space Management	4+
15	Threat Recognition	3+
17	Off-Station/Turnover	4+
18	Checklists	4+
19	Tactical Radio Procedures	4+
20	Crew Resource Management	3+
21	Mission Ownership	3+
22	Prioritization	3+
23	Scan	4+
24	Operational Charts	4+

MIF continued on next page

CTS REF	MANEUVER	P3303
25	On-Station Navigation	4+
26	Terrain Avoidance/Standoffs	4+
27	Operational Record Keeping	3+
33	Acoustic Operations	4+
35	Debrief	3+

Blk #	Media	Title	Events	Hrs	H/X
P34	MCS	Maritime Patrol and Reconnaissance	3	9.0	3.0

1. Prerequisites

- a. P1301 - P1304 prior to P3401.
- b. P1305-6 prior to P3402-3.

2. Syllabus Notes

- a. Students will begin the event just prior to on-station.
- b. In addition to the scheduled instructor, a CIS is required to operate the MCS for each event. This additional CIS will not attend the brief or debrief.
- c. Student should conduct one dual-platform event with another student conducting a similar event. P3402 or P3403 may be executed in a two-device (two students) or single-device (single student) configuration. If this event is executed with two paired devices, two CISs and two INFOs are required. All INFOs shall attend the brief and debrief. Should a student be unavailable, an additional instructor in a student-role may be utilized.

3. Special Syllabus Requirements. None.

4. Discuss Items

P3401 - MPR Composite 1

MPR coordinated OPS communications flow, ASW turnover, ASW SAC procedures, and coordinated SSC

P3402 - MPR Composite 2

DATUM, dog box report, coordinated operations low altitude rules, lateral/vertical Separation, coordinated OPS airspace guidelines, and OPCODE/TACON.

P3403 - MPR Composite 3

Air plans, contact classifications, ASW attack policy, WSM, compensatory allowance, and vectored attacks.

5. Block MIF

CTS REF	MANEUVER	P3403
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Airwork Recognition	4+
5	System Knowledge	4+
6	Mission Planning	4+
7	Brief	4+
8	On-Station/Check-In Procedures	4+
9	Radar Utilization	4+
10	Electro-Optical/Infrared Utilization	4+
11	ESM Utilization	4+
12	Data Link Utilization	4+
13	Electronic Warfare	4+
14	Battle Space Management	4+
15	Threat Recognition	4+
16	Search and Rescue	1
17	Off-Station/Turnover	4+
18	Checklists	4+
19	Tactical Radio Procedures	4+

MIF continues on next page.

CTS REF	MANEUVER	P3403
20	Crew Resource Management	4+
21	Mission Ownership	4+
22	Prioritization	4+
23	Scan	4+
24	Operational Charts	4+
25	On-Station Navigation	4+
26	Terrain Avoidance/Standoffs	4+
27	Operational Record Keeping	4+
28	ISAR Utilization	4+
29	Surface Search	4+
30	SAR Utilization	4+
31	Littoral Surveillance	4+
32	Signal Collection	4+
33	Acoustic Operations	4+
34	Coordinated Operations	4+
35	Debrief	4+

Blk #	Media	Title	Events	Hrs	H/X
P35	MCS	Maritime Patrol and Reconnaissance Check Flight	1	3.0	3.0

1. Prerequisite. P3403.
2. Syllabus Notes
 - a. Students will begin the event just prior to on-station.
 - b. In addition to the scheduled instructor, a CI is required to operate the MCS for this event. This additional CI will not attend the brief or debrief.
3. Special Syllabus Requirements. None.
4. Discuss Items. Any previously discussed items from the MPR stage.
5. Block MIF

CTS REF	MANEUVER	P3590
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Airwork Recognition	4+
5	System Knowledge	4+
6	Mission Planning	4+
7	Brief	4+
8	On-Station/Check-In Procedures	4+

MIF continued on next page.

CTS REF	MANEUVER	P3590
9	Radar Utilization	4+
10	Electro-Optical/Infrared Utilization	4+
11	ESM Utilization	4+
12	Data Link Utilization	4+
13	Electronic Warfare	4+
14	Battle Space Management	4+
15	Threat Recognition	4+
16	Search and Rescue	1
17	Off-Station/Turnover	4+
18	Checklists	4+
19	Tactical Radio Procedures	4+
20	Crew Resource Management	4+
21	Mission Ownership	4+
22	Prioritization	4+
23	Scan	4+
24	Operational Charts	4+
25	On-Station Navigation	4+
26	Terrain Avoidance/Standoffs	4+
27	Operational Record Keeping	4+
28	ISAR Utilization	4+
29	Surface Search	4+
30	SAR Utilization	4+
31	Littoral Surveillance	4+
32	Signal Collection	4+
33	Acoustic Operations	4+
34	Coordinated Operations	4+
35	Debrief	4+

Chapter IX

Course Training Standards

1. Purpose. These standards outline the tasks and proficiency required of SNFOs during the Advanced MPR 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	
<ul style="list-style-type: none">● A brief description of the behavior, required action, and/or conditions.	<ul style="list-style-type: none">● 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	
<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/recites critical action steps from memory with 100 percent accuracy. Correctly communicates with the crew to accomplish the procedure(s). Uses correct checklist to complete procedures when conditions permit. Proactively responds to compound emergencies and engages in discussion with crewmembers to achieve a resolution. Initiates procedures in a timely manner.
3. Headwork/Situational Awareness	
<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"> Understands instructions, demonstrations, and 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 aircraft configuration, traffic in vicinity of own ship, and dynamic weather conditions.

4. Basic Airwork Recognition	
<ul style="list-style-type: none"> Recognize and direct desired altitude, airspeed, and heading during flight. 	<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.
5. System Knowledge	
<ul style="list-style-type: none"> Comply with the FTI and MCS Student Guide while maintaining a working knowledge of directives. Performs equipment operations with the aid of checklists and mission tasking brief. Monitors for system malfunctions and troubleshoots when needed. 	<ul style="list-style-type: none"> Describes the correct nomenclature, purpose, characteristics, functions, and limitations of MCS systems without error. Properly operates all functions of the GPS, FMS, flight instruments, and computer display. Monitors the status of all equipment and acknowledges degradations within 5 minutes of the malfunction. Properly troubleshoots equipment malfunctions.
6. Mission Planning	
<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. Acquires appropriate mission and weather data for the operational area. Clearly defines the mission overview and mission goals utilizing the appropriate message traffic and mission tasking brief. Plans the ops portion of the mission in a timely manner to meet all requirements IAW mission tasking brief..

7. 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 flight to include specific mission objectives, flight conduct, and contingency planning. • Conducts an accurate mission and safety brief given a standard mission briefing guide. • Interacts with instructors and other crewmembers in a professional manner.
8. On-Station/Check-In Procedures	
<ul style="list-style-type: none"> • Directs/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/performs proper ingress procedures IAW the mission tasking brief. • Completes on-station checklist before entering the operational area. • Properly assesses mission equipment status. • Communicates with the controlling authority IAW checklists and mission tasking brief. • Directs/performs mission tasking updates received from the controlling authority.

9. Radar Utilization	
<ul style="list-style-type: none">• Directs/performs radar operations with the aid of checklists and mission tasking brief.	<ul style="list-style-type: none">• Properly describes theory of operation and function of the radar and IFF Interrogator and Transponder.• Properly operates all functions of the radar equipment.• Utilizes the proper radar horizon to allow for an effective radar plot.• Properly operates the air/ground radar equipment to determine ground features.• Properly operates the air/ground radar equipment to identify, assess, and avoid weather hazards.• Properly operates the radar equipment to effectively plot and identify surface contacts.• Monitors the status of the radar and acknowledges sensor degradations within 5 minutes of the malfunction while using the radar.• Properly operates all functions of the IFF Interrogator and Transponder.• Properly operates the IFF Interrogator to effectively plot and identify contacts.• Monitors the status of the IFF Interrogator and Transponder and acknowledges sensor degradations within 5 minutes of the malfunction.• Properly troubleshoots all radar malfunctions.

10. Electro-Optical/Infrared Utilization	
<ul style="list-style-type: none">• Directs/performs EO/IR operations with the aid of checklists and mission tasking brief.	<ul style="list-style-type: none">• Properly describes theory of operation and function of the EO/IR equipment.• Properly operates all functions of the EO/IR equipment.• Properly operates the EO/IR equipment to determine static and dynamic contacts.• Monitors the status of the EO/IR equipment and acknowledges sensor degradations within 5 minutes of the malfunction.• Properly troubleshoots all EO/IR equipment malfunctions.
11. ESM Utilization	
<ul style="list-style-type: none">• Performs ESM operations with the aid of checklists and mission tasking brief.	<ul style="list-style-type: none">• Properly describes theory of operation and function of the ESM equipment.• Properly operates all functions of the ESM equipment.• Properly operates the ESM equipment to evaluate the emitter type and determine the contact/point of origin.• Correlates emitter with the correct platform.• Monitors the status of the ESM equipment and acknowledges sensor degradations within 5 minutes of the malfunction.• Properly troubleshoots all ESM equipment malfunctions

12. Data Link Utilization	
<ul style="list-style-type: none"> ● Performs data link operations with the aid of checklists, appropriate messages, and mission tasking brief. 	<ul style="list-style-type: none"> ● Properly describes theory of operation and function of the data link equipment. ● Properly operates all functions of the data link equipment. ● Describes all nomenclature as it pertains to data link employment. ● Properly 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 5 minutes of the malfunction. ● Properly troubleshoots all data link malfunctions.
13. Electronic Warfare	
<ul style="list-style-type: none"> ● Directs/performs EW procedures upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization. 	<ul style="list-style-type: none"> ● Correlates EW information with other sensors. ● Prioritizes EW contacts with regard to importance and threat. ● Adjusts aircraft altitude and position for optimal EW reception. ● Clearly and concisely communicates EW threat data to friendly assets utilizing brevity

14. Battle Space Management	
<ul style="list-style-type: none"> ● Directs/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. ● Maintains positional awareness with friendly assets. ● Performs and prioritizes transmissions in a multiple communications environment. ● Executes proper Rules of Engagement (ROE) procedures. ● Properly utilizes friendly assets within respective capabilities.
15. Threat Recognition	
<ul style="list-style-type: none"> ● Directs/performs threat recognition upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization. 	<ul style="list-style-type: none"> ● Conducts proper self-defense procedures by properly positioning the aircraft to counter threats. ● Performs and utilizes aircraft capabilities and limitations for the most advantageous method to counter a threat. ● Directs the proper search strategy to identify threats. ● Conducts proper analysis of a threat. ● Directs the proper threat localization strategy. ● Directs the proper threat tracking strategy. ● Directs the proper threat attack strategy per the ROE. ● Directs friendly assets to optimal positioning to counter threats. ● Determines status/condition of attacked target. ● Conducts proper BHA procedures.

16. Search and Rescue	
<ul style="list-style-type: none"> • Directs/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 the proper search strategy. • 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.
17. Off-Station/Turnover	
<ul style="list-style-type: none"> • Directs/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/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.
18. 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.

19. Tactical Radio Procedures	
<ul style="list-style-type: none">• Communicates/performs with standard terminology IAW the unclassified tactical aid, checklists, and FTI.• 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.• 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.• Properly encrypts sensitive information during an unsecure transmission utilizing the card-of-the-day.• Executes operations normal report, as required.

20. Crew Resource Management	
<ul style="list-style-type: none"> ● Directs aircrew and other resources to minimize workload in order to enhance SA. 	<ul style="list-style-type: none"> ● Directs aircrew using standard communications. ● Communicates with brevity to crewmembers and outside agencies. ● Coordinates with crewmembers to conduct mission duties. ● Delegates aircrew tasks as appropriate. ● Makes timely recommendations to maintain aircraft flight parameters through all regimes of flight. ● Uses appropriate interaction between crewmembers with regard to normal aircraft procedures. ● Uses SA building communications with crewmembers and outside agencies. ● Displays assertive behavior with crewmembers when necessary. ● Demonstrates the use of all CRM skills to effectively use all resources, information, and knowledge to guide the crew to the successful achievement of all tasks in flight.
21. 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/courses of action. ● Takes command of mission execution and provides reasonable alternatives to mission plan due to evolving and dynamic circumstances.

22. 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).
23. 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. Recognizes any deviations from desired heading, airspeed, or altitude and makes recommendations for appropriate and timely corrections. Utilizes the TACPLOT display to recognize any changes to the tactical situation.
24. Operational Charts	
<ul style="list-style-type: none"> Prepares operational charts. 	<ul style="list-style-type: none"> Utilizes the proper chart for the terminal and on-station environments. Annotates NAVAIDs and route on the appropriate chart. Annotates special use airspace, MSA, MESA, MOSA, and standoffs on the appropriate chart. Properly labels each chart.

25. 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 safe distance from standoffs to include land, weapons, and ships. • Maintains terrain avoidance. • Performs hourly fixes and 30-minute DRs.
26. Terrain Avoidance/Standoffs	
<ul style="list-style-type: none"> • Directs/performs terrain avoidance procedures. • Directs/performs standoff procedures. 	<ul style="list-style-type: none"> • Performs proper MESA calls along the route of flight if applicable. • Performs proper MOSA calls within 15 NM of a landmass obstruction. • Performs proper standoff calls for land, weapons, and ships. • Coordinates a CPA with the pilot for MSA, MESA, MOSA, and standoff calls.
27. Operational Record Keeping	
<ul style="list-style-type: none"> • Performs operational record keeping procedures. 	<ul style="list-style-type: none"> • Properly fills out the administrative and communications data. • Logs 100 percent of all fixes and DRs. • Logs 80 percent of all tactical-related events.
28. ISAR Utilization	
<ul style="list-style-type: none"> • Directs/performs ISAR operations with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> • Properly operates all functions of the ISAR equipment. • Directs the optimal flight conditions to achieve a proper ISAR image. • Properly identifies the surface contact features utilizing the ISAR mode. • Monitors the status of the ISAR mode and acknowledges sensor degradations within 5 minutes of the malfunction. • Properly troubleshoots all ISAR mode malfunctions.

29. Surface Search	
<ul style="list-style-type: none"> ● Directs/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"> ● Completes sensor status checks as it pertains to surface search. ● Completes environmental assessment as it pertains to surface search. ● Directs/performs surface search strategy. ● Performs RADAR plot. ● Identifies surface contacts utilizing sensors available. ● Properly identifies hull profiles and features as required. ● Logs 90 percent or more of surface COIs'/CCOIs' position, course/speed, and description. ● Reports 90 percent of the surface contacts via link or voice report (if link degraded). ● Reports COIs and CCOIs IAW the mission tasking brief within 5 minutes of identifying. ● Reports unusual or suspicious surface traffic IAW the mission tasking brief within 5 minutes of the incident. ● Performs proper localization procedures. ● Performs proper tracking procedures. ● Directs rigging procedures IAW the mission tasking brief.
30. SAR Utilization	
<ul style="list-style-type: none"> ● Directs/performs SAR operations with the aid of checklists and mission tasking brief. 	<ul style="list-style-type: none"> ● Properly operates all functions of the SAR equipment. ● Directs the optimal flight conditions to achieve a proper SAR image. ● Properly operates the SAR mode to acquire usable images. ● Monitors the status of the SAR mode and acknowledges sensor degradations within 5 minutes of the malfunction. ● Properly troubleshoots all SAR mode malfunctions.

31. Littoral Surveillance	
<ul style="list-style-type: none">• Directs/performs littoral surveillance procedures upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization.	<ul style="list-style-type: none">• Completes sensor status checks as it pertains to littoral surveillance.• Completes environmental assessment as it pertains to littoral surveillance.• Directs/performs littoral surveillance strategy.• Directs the aircraft altitude and position for optimal coverage.• Properly compares order of battle imagery of port facilities to the mission tasking brief.• Reports COIs and CCOIs IAW the mission tasking brief within five minutes of identifying within a port facility.• Reports unusual or suspicious port facility actions IAW the mission tasking brief within 5 minutes of the incident.

32. Signal Collection	
<ul style="list-style-type: none">• Determines and acts upon signals prioritization and mission requirements.• Identifies signals necessary for successful mission completion and mission requirements.• Executes ESM reporting procedures and mission profile.	<ul style="list-style-type: none">• Properly locates 80 percent or more of tasked and/or priority signals.• Completes 80 percent or more of tasked signals.• Leaves no more than two high priority signals unprocessed/reported.• Makes no more than 3 errors identifying signals.• Identifies threat signals with no more than 2 errors.• Identifies signals in a timely manner so as not to hinder mission accomplishment.• Makes 80 percent or more of tactical reports (TACREPS) within 5 minutes of threat recognition.• Updates 80 percent or more of TACREPS as appropriate for DF location and emitter mode changes.• Uses the correct brevity codes on 80 percent of reports or greater.• Correctly annotates 80 percent of TACREP calls on log.• ESM log entries include emitter name, type, location, TACREPs, SITREPs, and malfunctions.

33. Acoustic Operations	
<ul style="list-style-type: none">• Directs/performs acoustic operating procedures upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization.	<ul style="list-style-type: none">• Directs all sonobuoy drops with the pilot.• Properly and safely deploys a basic passive sonobuoy search pattern by coordinating with mission commander.• Properly and safely deploys a basic passive sonobuoy localization pattern by coordinating with mission commander.• Tracks a contact utilizing Doppler contact from passive sonobuoys.• Tracks a contact utilizing either passive bearings, or simulated active contact, and develops a track.• Properly logs ASW environmental data and appropriately reports information to other assets as applicable.• Communicates initial contact report within 5 minutes of subsurface contact and updates authority every 15 minutes or at each dynamic change.• Updates track utilizing all sensor information available and appropriately coordinates with all crew members.

34. Coordinated Operations	
<ul style="list-style-type: none">• Directs/performs coordinated operations procedures upon arriving on-station with the aid of checklists, mission tasking brief, and sensor utilization.	<ul style="list-style-type: none">• Maintains safety of flight as the priority at all times.• Utilizes all airborne and surface asset sensors to aid in the search of hostile forces.• Aids mission commander with the proper determination of classification of a subsurface contact.• Communicates pertinent information to the proper controlling authority in less than 5 minutes of discovery.• Properly communicates with other airborne assets and surface assets.• Coordinates airborne assets and surface assets as directed by tasking authority.• Maintains SA of water space management.• Immediately communicates “Dog Box” reports.• Immediately communicates hostile actions towards a friendly asset.• Properly delineates air plans to airborne assets as Scene of Action Commander.

35. 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, BHA, 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.

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Chapter X

Master Materials List

1. Individually Issued Materials

TITLE	IDENTIFICATION	QTY PER STUDENT
a. NFOTS Advance Maritime Command and Control Master Curriculum Guide	CNATRAINST 15.482	1
b. MPR Flight Training Instructions	CNATRA P-Pub	1
c. MPR Flight Training Preparation Guide	CNATRA P-Pub	1

2. Aircraft and/ or Major Training Devices

- a. Multi-Crew Simulator (2B51) quantity controlled by Naval Air Warfare Center Training Systems Division (NAVAIRWARCENTRASYS DIV), Training Material Management Division, Inventory Control Branch.

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