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CHIEF OF NAVAL AIR TRAINING



INTERMEDIATE NAVAL FLIGHT OFFICER TRAINING SYSTEM (NFOTS) CURRICULUM

2015



DEPARTMENT OF THE NAVY
CHIEF OF NAVAL AIR TRAINING
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CNATRA INSTRUCTION 1542.163A

Subj: INTERMEDIATE NAVAL FLIGHT OFFICER TRAINING SYSTEM (NFOTS)
CURRICULUM

1. Purpose. To publish the curriculum for training Naval Flight Officers (NFOs) in the Intermediate phase of Naval Air Training Command (NATRACOM) flight training.
2. Cancellation. CNATRAINST 1542.163 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. Forms. The CNATRA forms required by this instruction are automated in the Training Integration Management System (TIMS) computer program. Additional CNATRA forms are available on the CNATRA website <https://www.cnatra.navy.mil/pubs/forms.htm>.


D. M. EDGECOMB
Chief of Staff

Distribution:
CNATRA Website

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COURSE DATA

1. Course Title. Intermediate Naval Flight Officer Training System (NFOTS) Curriculum.
2. Course Identification Number. Q-2D-0163.
3. Location(s). Naval Air Station (NAS) Pensacola.
4. Course Status. Active.
5. Course Mission. Intermediate NFOTS is designed to qualify graduates of this course for follow-on advanced flight training and prepare them for their future responsibilities as military officers.
6. Prerequisite Training. Successful completion of Primary 1 NFOTS (Q-2D-0162) and Primary 2 NFOTS (Q-2D-1162) Training.
7. Security Clearance Requirements. None.
8. Follow-on Training. Advanced Strike Fighter Undergraduate Military Flight Officer (UMFO) Training or Undergraduate Military Flight Officer (UMFO) Advanced Maritime Command and Control (MC2) Training.
9. Course Length. Overall time-to-train calculated in accordance with CNATRAINST 1550.6E. Training Days account for factors including weather, personnel and equipment availability, briefing and preparation time, and historical delays. Calendar Weeks further account for weekends, holidays, safety standdowns, and other expected nonworking days.

	<u>Training Days</u>	<u>Calendar Weeks</u>
Intermediate:	16.6	3.7
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.
- 14. Quota Control. CNO.
- 15. Course Training Subjects
 - a. Intermediate Ground Training

INTERMEDIATE ADMINISTRATION		
Stage	Symbol	Hours
Intermediate Check-In and Checkout	G0101-2	2.25
Totals		2.25

- b. Intermediate Flight Support

INTERMEDIATE FLIGHT SUPPORT		
Stage	Symbol	Hours
Section Instrument Navigation Flight Support	F1101-3	9.5
Section Visual Navigation Flight Support	F1201-2	13.5
Totals		23.0*

Note: Intermediate Flight Support totals include 3.0* hours accomplished as a self-study in the UTD. These hours are also included on the Intermediate Flight Training table.

- c. Intermediate Flight Training. The programmed times for each phase, stage, and media are:

INTERMEDIATE FLIGHT TRAINING				
Flight/Events	UTD*		T-6A	
	Flts	Hrs	Flts	Hrs
Instrument Navigation			2	3.0
Section Instrument Navigation (SS*)	1	1.5*	4	6.0
Section Tactical Formation			1	1.5
Section Visual Navigation (SS*)	1	1.5*	3	4.5
Section Visual Navigation Check Ride			1	1.5
Totals	2	3.0*	11	16.5

Note: Totals include 3.0* hours self-study in the UTD without an instructor. Self-study UTD will be formally scheduled.

16. Training Preparation Time. In addition to the hours formally planned for classes, simulators, and flights, significant additional time to prepare and study should be expected outside of scheduled training hours. This range will vary depending on the complexity of the material and individual student needs, and may be up to several hours per event. For simulator and flight events, specific brief and taxi times will be programmed into TIMS and accounted for on the flight schedule, per the following table:

ADDITIONAL FORMAL TRAINING TIME PER CURRICULUM HOUR/EVENT			
Training Area	Brief/ Preflight/ Taxi	Taxi/ Debrief	Total
Flights: I4401-2 and F4201-4	2.0	1.5	3.5
Flights: F4301, F4401-3, and F4590	2.5	1.5	4.0

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), Unit Training Device (UTD), self- and group-paced study, and in-flight instruction.

20. Preceding Curriculum Data. Replaces CNATRAINST 1542.163.

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

ABBREVIATIONS

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

AGL	-	Above Ground Level
AIM	-	Aeronautical Information Manual
AOB	-	Angle of Bank
ASR	-	Airport Surveillance Radar
ATC	-	Air Traffic Control
ATF	-	Aviation Training Form
ATIS	-	Automated Terminal Information Service
ATJ	-	Aviation Training Jacket
ATS	-	Aviation Training Summary
AWOS	-	Automated Weather Observation System
BAC	-	Basic Approach Configuration
BAR	-	Basic Airwork Recognition
CDI	-	Course Deviation Indicator
CHUM	-	Chart Updating Manual
CNATRA	-	Chief of Naval Air Training
CO	-	Commanding Officer
CRM	-	Crew Resource Management
CTS	-	Course Training Standards
DA	-	Decision Altitude
DME	-	Distance Measuring Equipment
DRAFT	-	Destination, Route, Altitude, Fuel, Time
EOB	-	End of Block
EP	-	Emergency Procedure
ET	-	Extra Training

ETA - Estimated Time of Arrival
ETE - Estimated Time Enroute
FAA - Federal Aviation Administration
FAF - Final Approach Fix
FAR - Federal Aviation Regulations
FPC - Final Progress Check
FSS - Flight Service Station
FTI - Flight Training Instruction
FWOP - Fixed-Wing Operating Procedures
GCA - Ground-Controlled Approach
GPS - Global Positioning System
H/X - Hours per Event
IAF - Initial Approach Fix
IAW - In Accordance With
ICS - Intercommunication System
IFR - Instrument Flight Rules
IFS - Introductory Flight Screening
IMS - International Military Student
IMSO - IMS Officer
IP - Instructor Pilot
IPC - Initial Progress Check
KIAS - Knots Indicated Airspeed
LECT - Lecture
LOC - Localizer
MAP - Missed Approach Point
MCF - Mission Completion Fuel

MDA - Minimum Descent Altitude
MIF - Maneuver Item File
MIL - Mediated Interactive Lecture
MPAS - Squadron Average PAS
MTR - Military Training Route
NATOPS - Naval Air Training and Operating Procedures
Standardization
NAVAID - Navigational Aid
NFO - Naval Flight Officer
NFOTS - NFO Training System
NG - No Grade
NM - Nautical Miles
NMU - Number of Marginals and UNSATs
NORDO - No Radio
NOTAMs - Notices to Airmen
NSS - Naval Standard Score
OFT - Operational Flight Trainer
OPSO - Operations Officer
PAR - Precision Approach Radar
PAS - Phase Aggregate Score
PCL - Pocket Checklist
PMSV - Pilot-to-Metro Service
PTP - Point-to-Point
RA - Radar Approach
RAIM - Receiver Autonomous Integrity Monitoring
RNAV - Area Navigation System
RRU - Ready Room Unsatisfactory

SA - Situational Awareness
SDPAS - Standard Deviation of Squadron PAS
SMS - Student Monitoring Status
SNFO - Student Naval Flight Officer
SOP - Standard Operating Procedure
SS - Self-Study
SSR - Special Syllabus Requirement
SUA - Special Use Airspace
TBD - To Be Determined
TOT - Time-On-Target
TPC - Tactical Pilot Chart
TRAWING - Training Wing
TRB - Training Review Board
UHF - Ultra High Frequency
UNSAT - Unsatisfactory
UTD - Unit Training Device
VDP - Visual Descent Point
VFR - Visual Flight Rules
VHF - Very High Frequency
VMC - Visual Meteorological Condition
VNAV - Visual Navigation
VOR - Very High Frequency Omnidirectional Range
XO - Executive Officer

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. A grade sheet documenting student performance for all categories of training regardless of media, phase, or stage.
3. Aviation Training Jacket. The aviation training jacket (ATJ) is the student's training record. It contains aviation training forms, calendar card, grade reports, and all other associated training information. It is filed in student control and follows the student through all phases of training.
4. Block of Training. A sequential series of lessons within a training stage sharing identical MIFs. The third character in the lesson designator identifies a block.
5. Blue ATF. A standard ATF that is printed on blue paper. The blue ATF is used to denote a Marginal event.
6. Check Ride (SXX90). A flight check in any stage of training.
7. Class Advisor. An instructor assigned to provide counseling and guidance to a specific class throughout the applicable syllabus.
8. Course of Training. The entire program of preflight, flight, simulation, academics, and officer development conducted in all media during the programmed training days.
9. Course Training Standard (CTS). A description of required behaviors and standards of performance for a specific maneuver. These standards are in Chapter IX.
10. Courseware. The technical data, flight training instructions, audio, video, film, mediated interactive lecture, computer-assisted instruction, instructor guides, student study guides, and other training material developed to support and implement the syllabus of instruction.

11. Critical 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.
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 1542.163A.
13. Drop on Request. A student's voluntary option to request termination of training IAW CNATRAINST 1500.4H.
14. Emergency Procedure. Any degradation of aircraft systems or flight conditions requiring pilot action or intervention.
15. End of Block. Last event in block. The student must meet or exceed MIF on all critical items and all optional items attempted in the block to progress past EOB.
16. Extra Training (SXX87). Additional student training flights ordered by the Operations Officer (OPSO) or higher, in order to make up for Squadron/IP instructional deficiencies.
17. Final Progress Check (SXX89). A special check normally given by the Commanding Officer or Executive Officer. The CO may delegate FPC duty to a qualified O-4 or above in the event that neither the CO nor XO are qualified or available to instruct in the required stage. A satisfactory FPC returns the student to normal syllabus flow. An UNSAT FPC results in a TRB.
18. Fixed-Wing Operating Procedures Manual. A training wing directive describing standard operating procedures for local fixed-wing aircraft.
19. Flight Training Instruction. A CNATRA-approved manual describing flight procedures and techniques for each training stage.

20. Hours per X. The average length for each event in a block, rounded to the nearest tenth of an hour.

21. Initial Progress Check (SXX88). A special check given by the OPSO or his representative as designated in writing by the CO. A satisfactory IPC returns the student to normal syllabus flow. An UNSAT IPC results in an FPC.

22. Lesson Designator. All syllabus events have a five-character lesson designator in the following format:

Char	Meaning	Remarks		
1 st	Stage	G-Ground	I-Instrument	F-Formation
2 nd	Media	0-Ground Event	1-Academics	4-Aircraft
3 rd	Block	Sequential, indicating block within stage.		
4 th &	Event/ Check	Sequential, indicating event within block, or other event types as shown below:		
5 th	Identifier	84-Adaptation Flight	87-Extra Training	88-Initial Progress Check
		85-Practice Sim	89-Final Progress Check	
		86-Warmup	90-Check Ride	

23. Maneuver Item File. A listing of required maneuvers and associated proficiency levels for each block of training.

24. Master Syllabus. Chapters I-VII list all training syllabus activities, prerequisites, and desired training flow for NFOTS.

25. Outcomes. Potential courses of action following a Progress Check. There are only two basic outcomes:

- a. Pass - Return to training.
- b. Fail - Proceed with the attrition process/attrite.

26. Phase of Training. A major division in the course of training. The NFOTS syllabus consists of Primary (Primary 1 and 2), Intermediate, and Advanced (Strike Fighter and Maritime Command and Control) 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 generating a progress check.
28. Progress Check Pilot. An instructor pilot authorized and designated in writing by the CO to administer Initial or Final Progress Checks.
29. Ready Room UNSAT (RRU). An UNSAT grade given for inadequate knowledge of flight procedures, systems, discuss items, emergency procedures, or deficient preflight planning.
30. Special Syllabus Requirement. One time, ungraded demonstration item(s).
31. Stage of Training. All training of a particular type (Ground, Instrument, Formation) within a phase. The first letter in the lesson designator identifies the stage of each lesson (Example: I4401 is in the Instrument stage).
32. Standard Operating Procedure. A training wing or squadron directive describing SOPs for local aircraft.
33. Student Monitoring Status. SMS is a squadron-initiated status to address substandard student performance.
34. Training Media. NFOTS media include aircraft (T-6A), ground training, and academics (MIL) events. The second character in the lesson identifier designates the training medium.
35. Training Review Board. A fact-finding board appointed to conduct an administrative review of circumstances and procedures relative to an FPC recommendation for a student's attrition.
36. Training Time Out. Cessation of any training evolution initiated when a student or instructor expresses concern for personal safety or a condition warrants clarification of procedures or requirements IAW CNATRAINST 1500.4H.

37. Warmup Event(s) (SXX86). Additional events given to allow a student to regain a level of proficiency previously demonstrated which has diminished due to an extended break in training.

38. Yellow ATF. A standard ATF that is printed on yellow paper. The yellow ATF is used to denote an UNSAT event that does not generate a progress check.

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Chapter I

General Instructions

1. Syllabus Management

- a. Distribution. Participating 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 1550.6E.
- e. Execution. Students selected for carrier aviation execute Intermediate events.
- f. Syllabus Description. Intermediate NFOTS is flown in the T-6A and is divided into stages. Stages are grouped by like-flight training regimes such as Section Instruments and Section Visual Navigation. Each stage is subdivided into training blocks. The training blocks consist of a specified number of flights. 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). An SNFO's PAS is a comparative ranking based on the previous population of completers for a specific phase of aviation training. PAS indicates only SNFO performance relative to a normative population of other recent SNFOs. Under the NFOTS, PAS is not by itself an indication of whether an SNFO has met the criteria necessary for winging or continuation in aviation training.

(2) NFOTS SNFO Calculations. From a population of previous SNFOs, an SNFO's PAS is calculated using equation (1), below:

$$SNFO_PAS = 50 + 10 * \left(0.81 * \frac{S - M1}{S1} + 0.1 * \frac{M2 - NMU}{S2} + 0.09 * \frac{Acad - M3}{S3} \right) \quad (1)$$

Where

- S - SNFO Score
- NMU - SNFO NMU
- Acad - SNFO Academic Grades
- M1 - Squadron Average Score
- M2 - Squadron Average Number of Marginals and UNSATs
- M3 - Squadron Average Academic Grades
- S1 - Standard Deviation of Squadron Score
- S2 - Standard Deviation of Squadron NMU
- S3 - Standard Deviation of Squadron Academic Grades

(3) Naval Standard Score (NSS). NSS is calculated to correct for potential non-normality in the distribution of PAS. NSS is calculated from PAS by using equation (2), below:

$$NSS = 50 + 10 * \left(\frac{PAS - MPAS}{SDPAS} \right) \quad (2)$$

Where

- PAS - SNFO PAS
- MPAS - Squadron Average PAS
- SDPAS - Standard Deviation of Squadron PAS

h. Accelerated Students. Students with significant prior flight time, excluding Introductory Flight Screening (IFS) or IFS equivalent, may be considered accelerated. During the accelerated period, the student may progress to the next block of training once MIF is met within the current block of training. Squadron COs have the authority to tailor the student's accelerated syllabus based on the student's past flying experience. ATFs for the events not flown will be completed with a note in the remarks section stating "ACCELERATED-EVENT NOT FLOWN. ATF COMPLETED FOR ADMINISTRATIVE PURPOSES ONLY IAW CNATRAINST 1542.163A."

2. Training Management

a. Syllabus Progression. Fly syllabus events within each stage sequentially. Do not start a block without all prerequisites. Students must complete all events. System training management is designed to facilitate two graded events (flight, simulator, or exam) per student per day.

b. Maneuver Continuity. Students must accomplish previously graded procedures frequently enough to ensure required proficiency is maintained.

c. Hours per Event (H/X). Instructors shall plan and execute missions to meet H/X as closely as practical. If actual event length varies from H/X by more than 0.3 hrs (greater or less than), the instructor shall annotate reason(s) in the ATF's general comments section.

d. Location of Training. Student events may be accomplished at home station or on cross-country/detachments where applicable.

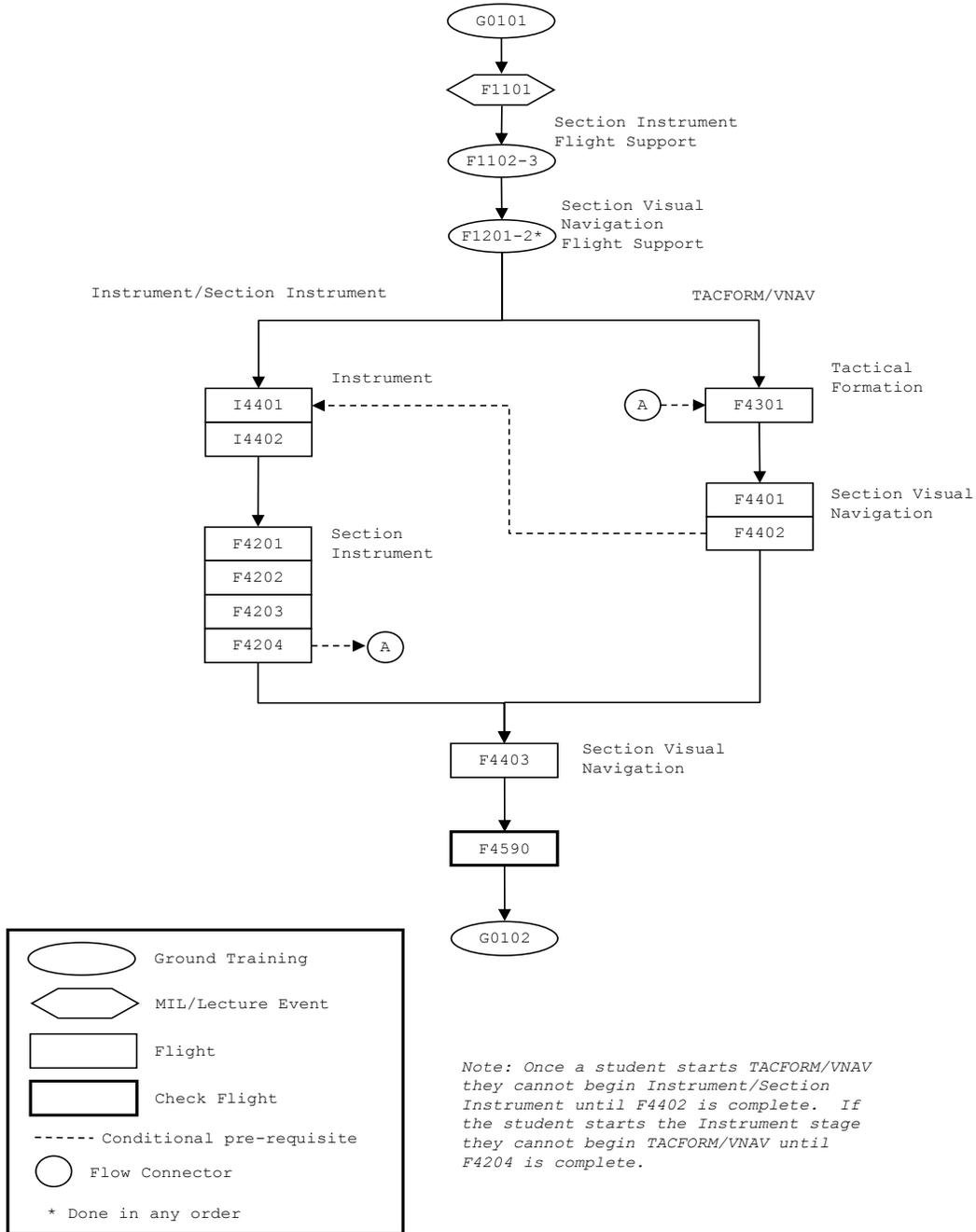
e. Special Syllabus Requirements. There are no SSRs for this phase of training.

f. ATJ Reviews. The Class Advisor (CA) or other qualified flight instructor shall conduct jacket reviews at least weekly. Additionally, SMS students require weekly ATJ reviews from the Student Control Officer.

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**NFOTS COURSE FLOW
(INTERMEDIATE)**



3. Unsatisfactory (UNSAT) Performance. (See also **Progress Check Procedures**, Chapter I, paragraph 10c(3).)

a. Flight

(1) If syllabus events remain in the block, the student shall progress to the next syllabus event, until the second consecutive UNSAT or third cumulative UNSAT in the block.

(2) If no syllabus events remain, repeat the last syllabus event in the block until the student meets EOB MIF, or until the second consecutive UNSAT or third cumulative UNSAT in the block.

(3) If the SNFO receives an UNSAT that does not result in an IPC/FPC, the ATF shall be printed on yellow paper.

(4) An UNSAT check flight (SXX90), two consecutive UNSATs in block, three cumulative UNSATs (in the same block), four total UNSATs in phase, or RRU result in a Progress Check. Document the failed check flight or second consecutive/third (in block) cumulative UNSAT on a pink ATF for that syllabus event.

b. Ready Room UNSAT (RRU). An RRU is defined as either of the following:

(1) An SNFO is inadequately prepared for the scheduled event. The RRU shall 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 maneuver column(s) that triggered the RRU. Upon completion of the progress check, the event shall be flown to completion and general knowledge and emergency procedures shall be incorporated into the overall grading solution.

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

(3) For purposes of determining when IPCs or FPCs are required, RRUs and UNSAT flight/simulator events all contribute to the same IPC/FPC process; each SNFO may only have one IPC per phase of training.

c. Academic. Two academic examination failures in a phase trigger an FPC. The FPC shall be completed prior to retake.

d. Remediation. A simulator or ground evaluation emphasizing the deficient areas may clear an UNSAT check ride or EOB syllabus event caused solely by ground operations.

e. Restrictions. Until remediating the UNSAT:

(1) The student shall not accomplish training in any other stage.

(2) The student may accomplish academic classes, examinations, and ground training events, provided the UNSAT event was not a prerequisite.

4. Training Review Board. The TRAWING shall conduct a TRB on all NFSs recommended for attrition.

a. The TRB shall consider the quality of training provided, continuity of training provided, outside influences, and extenuating circumstances.

b. The TRB shall not make recommendations based on perceived NFS potential or aspects unrelated to the administrative application of the NFS's training.

c. For more information, refer to CNATRAINST 1500.4H.

5. Instructor Continuity. There are no continuity requirements unless specified by the Operations department for SMS students.

6. Break in Training Warmup Events (SXX86)

a. Nonsyllabus warmup events compensate for breaks in training. Eligibility is based on the number of days since the last flight or simulator in the same stage. All warmups shall be dual (flight) or instructional (simulator) and coded as an SXX86 (e.g., I4486). Warmup grades do not satisfy block or MIF requirements and shall not be included in the cumulative totals.

b. Warmups Between Stages. Warmup events shall not be given prior to the first event in stage unless more than 30 days have elapsed since any syllabus event has been conducted (refer to CNATRAINST 1500.4H for warmup event guidelines).

c. Warmup Flights for Extended Breaks in Training. For administration of warmup events for breaks in training of more than 30 days, the CO shall determine an appropriate warmup plan per CNATRAINST 1500.4H.

d. Warmup Event Criteria. Refer to the chart below for awarding WU events in stage.

e. Optional Warmup Event Criteria. Optional warmup criteria are defined in CNATRAINST 1500.4H. Optional warmup events are based on the student's performance. If the student is in the optional warmup window and their performance meets MIF or is sufficient to meet MIF by the end of block, the event shall count as the next syllabus event. If the student's performance is Marginal or UNSAT, the event will be **graded as such and** coded as a warmup.

CRITERIA FOR AWARDING WARMUP EVENTS IN STAGE		
Break* (Days)	Warmup Events	Remarks
7-13 Sim to A/C	1 Mandatory Simulator	<ul style="list-style-type: none"> • Mandatory WU is not an advancing event. • WU event may be flown in aircraft with the TRAWING Commander's approval.
7-13 All Others	1 Optional	<ul style="list-style-type: none"> • Optional WU based on performance and is required if overall grade is Marginal or UNSAT. • Optional WU is prohibited if performance meets MIF or is sufficient to meet MIF by EOB.
14-30 Sim to A/C	2 Mandatory Simulators	<ul style="list-style-type: none"> • Mandatory WUs are not advancing events. • For blocks with a single simulator event, only one mandatory WU event is required.
14-30 All others	1 Mandatory 1 Optional	<ul style="list-style-type: none"> • Mandatory WU is not an advancing event. • Optional WU based on performance and is required if overall grade is Marginal or UNSAT. • Optional WU is prohibited if performance meets MIF or is sufficient to meet MIF by EOB.

*Break = (Current Julian Date) - (Julian Date of last simulator or flight event in stage).

7. Additional Flights/Simulators

a. Extra Training (ET) Events (SXX87). All ETs shall be coded as SXX87, e.g., I4487. ET events include, but are not limited to, IPC/FPC ET events. Award these events to compensate for training deficiencies, e.g., poor event/maneuver continuity or improper instruction.

(1) The CO may authorize one ET prior to an IPC and up to two ETs prior to an FPC.

(2) Authorization for IPC and FPC ET events shall be documented on a Supplementary ATF and shall clearly state the training deficiency that warrants the ET(s).

(3) IPC/FPC 87 events **shall not** be awarded to remediate UNSAT student performance unrelated to unit/instructional training deficiencies.

b. Adaptation Events (SXX84). The Squadron CO may provide events for adaptation to the flying environment when requested in writing by the flight surgeon, e.g., airsickness, eyeglasses, etc. These events shall be coded as SXX84 events.

8. Student Monitoring Status (SMS)

a. The objective of SMS is to focus supervisory attention to a student's progress in training, address performance deficiencies, and assess the student's potential to complete the program. SMS may also be applied to students who require supervisory attention while trying to resolve personal issues. The intent of SMS is to focus on struggling students to help them overcome their difficulties, and provide an expedited route to attrition if this focused attention is unsuccessful.

b. A student who receives two UNSATs in a block of training or three UNSATs within a phase of training shall be placed on SMS.

c. The squadron CO is not constrained to the UNSAT-related SMS trigger; a CO may place a student on SMS anytime that the CO perceives a need for focused attention to resolve student difficulties.

d. SMS is intended as a short-term program to address specific performance deficiencies within a block or stage of training. SMS requires that specific goals be met by student within a specific time period. Specific performance goals shall be related to training standards rather than relative performance against a student's peers. The time period may reference syllabus events.

e. An SMS training plan should include, but is not limited to, training tailored to correct specific deficiencies or to address personal issues.

f. A student's Class Advisor shall document placement on and removal from SMS in the student's ATJ via a Supplementary ATF. All SMS-related documentation shall be completed on blue paper. Documentation placing a student on SMS shall include:

- (1) The reason the student is being placed on SMS,
- (2) The specific goals to be met for successful removal from SMS,
- (3) The period of time the student is to be on SMS in order to achieve the specific goals,
- (4) Consequences for not meeting the goals (student shall proceed to FPC),
- (5) Specific additional training or extra instruction (if any),
- (6) Specific scheduling restrictions (if any), and
- (7) Any other applicable requirements or restrictions.

g. Documentation for unsuccessful removal from SMS shall include the specific goal(s) not achieved. For SMS that is triggered by a syllabus event, file the initiating blue SMS Supplementary ATF on the right side of the ATJ, directly above said event's grade sheet. Upon successful completion of SMS, file the closeout blue SMS Supplementary ATF on the right side of the ATJ, and directly above the closeout-event grade sheet. If SMS is not related to a syllabus event (i.e., personal issues, academic failure, etc.), then file the initiating and closeout blue SMS Supplementary ATFs on the left side of the ATJ, below the DOR and TTO policy statements.

h. If a student achieves their SMS goals within the SMS period, or when personal issues have been resolved, then the student is returned to the normal syllabus flow. If the student is unable to meet the specific goals of SMS, or performance does not improve, the student shall be referred to a Command-Directed FPC.

9. 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 critical items and optional items attempted in the block.

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

(a) A thorough knowledge of:

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

2. Procedural knowledge of the critical and optional items for the event's training block.

(b) A flight profile tailored to training requirements, weak areas, and continuity.

(c) The latest ATF for the stage.

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

(a) Discuss Items, as listed in Chapters III-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 CTS.

(b) The mission's complexity and student's progress will govern the time required for debrief.

(c) Debriefing must be detailed and comprehensive. The ATF shall be completed prior to the SNFO's next event. Exceptions may be made for out-and-ins and cross-country flights. In such instances, the SNFO will be provided feedback on performance as soon as possible following the event.

b. Emergency Procedures (EP) Briefing and Training

(1) EP training builds the student's confidence in the aircraft. The instructor shall conduct EP training on all aircraft events, either on the ground or in the aircraft. Correct procedural deficiencies through additional instruction and study assignments.

(2) Incorporate EP training into trainer events when practical; however, instructional block objectives take precedence.

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

10. 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 (Aircraft and Training Devices)

(1) Absolute Maneuver Grading. Use the following grading scale to document the student's characteristic performance on maneuvers attempted during each event. This is an absolute grading scale. Judge the student's proficiency only against the item's CTS. Maneuver grades shall be consistent with the ATF comments.

(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, detracting from performance. Corrections noticeably lag deviations, and may not be appropriate.

(d) Good (G/4 Level). Characteristic performance is within CTS. Deviations outside CTS are allowed, provided they are brief, minor, and do not affect safety of flight. Corrections must be appropriate and timely.

(e) Excellent (E/5 Level). Greatly surpasses CTS. Performance is correct, efficient, and skillful. Deviations are very minor. The student initiates corrections, if required, and they are appropriate, smooth, and rapid.

(2) Overall Event Grades. Overall event grades represent the student's progression through the syllabus. Grade events "Pass," "Marginal," or "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. Progress is adequate to meet standards by EOB.

2. EOB. The student's performance meets or exceeds standards.

(b) Marginal. Ability to meet the standards by the EOB is questionable. The ATF shall be printed on blue paper. Instructors shall not award a Marginal on an EOB event, check ride, IPC, or FPC. If performance is Marginal on an optional WU, the instructor shall ensure the event is re-coded as a WU (SXX86) prior to ATF completion.

(c) UNSAT. Student exhibits dangerous tendencies or progress toward meeting EOB standards is insufficient. UNSAT overall is at the instructor's discretion, unless it is triggered by regression rules. It should be noted that an event may be graded UNSAT without any individual maneuvers graded 2/Unable. If the student receives an UNSAT that does not result in an IPC or FPC, the ATF shall be printed on yellow paper. UNSAT Progress Checks and UNSAT events that result in a Progress Check shall be printed on pink paper.

(3) Awarding Overall Event Grades. The student's overall grade is based on the student's performance against the MIF. The following rules govern overall event grading.

(a) EOB MIF Performance. Performance must meet MIF by EOB. If the student has previously met MIF in the block, he or she must still meet MIF in the EOB flight if the maneuver is reattempted.

(b) Prior to EOB. Performance must meet/exceed previous block MIF. Example:

1. F43 MIF requires an F/3 for Headwork/Situational Awareness. F44 MIF requires a G/4.

2. The student must meet or exceed F/3 to progress out of F43.

3. The student must maintain or exceed F/3 until the last F44 event, by which time the student must attain G/4.

(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) Regression Rules. Regression addresses uneven progress through training. Regression rules do not apply to the first simulator or flight block in each stage. The following specifies allowable regression:

(a) The student is allowed up to two maneuver grades of F/3 where a G/4 is required on previous block MIF, and the instructor is satisfied the student is ready to progress to the next event.

(b) The instructor shall award an overall UNSAT due to regression rules if:

1. Regression was to a U/2 where F/3 or G/4 was required on previous block MIF, or

2. Performance on the same maneuver for two consecutive events resulted in an F/3 where a G/4 was required on previous block MIF, or

3. There was regression on more than two items during one event.

(5) Maneuver Requirements. For each block:

(a) Critical (Mandatory) Items. Items with a number and a plus(+) 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) Optional Items. Items with a number, but without a plus (+), are optional; however, if flown, the student must meet the required proficiency by EOB see paragraph 10.c.(2)(b) for check-ride exceptions).

(c) Not Demonstrated/Not Performed. The instructor will not demonstrate, nor will the student perform:

1. Unnumbered items.
2. Items not in the stage.
3. Exceptions:
 - a. Weather-driven instrument approaches.
 - b. Prebriefed maneuvers for instructor proficiency.

(6) Incomplete Events. In general, instructors should consider an event complete if the student is able to accomplish a sufficient amount of the planned profile. This rule is particularly true when weather precludes finishing all maneuver items, and the instructor is able to emphasize training where weather permits. Subsequent events in the block, when available, can reverse this emphasis, hence achieving overall training balance. If a student has had ample opportunity to learn a task and subsequently flies a short mission, the mission shall not be marked incomplete solely to provide unwarranted extra training.

(a) Assessment. Assess the event complete if:

1. Seventy-five percent of the event's hours per event (H/X) was used for training, and

2. There are sufficient events remaining in block to allow for completion of all remaining required maneuvers.

3. Otherwise, assess the event incomplete.

(b) Completion Events

1. An event may both complete a previous event and count as an advancing X.

2. 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 curriculum.

c. Policies for Evaluation Flights and Ground Evaluations

(1) Authorized Evaluators. The CO will designate check ride instructors for each stage.

(2) Check Rides (SXX90)

(a) Check Ride Progression. Check rides are single-event training blocks; therefore, all rules regarding progressing out of a block apply, except:

1. Student should fly a representative cross section of optional maneuvers.

2. Up to two optional maneuvers may be graded F/3 where G/4 is required without requiring an overall UNSAT.

3. The student should be able to demonstrate required levels of proficiency without instructor assistance. However, instruction is allowed on check events and students may reattempt maneuvers at the instructor's discretion.

4. The entire event should be devoted to assessing the student's skill attainment, ability, and readiness to progress to the next block of training. All maneuvers indicated with a plus (+) are check ride critical and must be completed to MIF. Regression rules do not apply.

(b) Incomplete Check Event. A check event shall be graded as incomplete when:

1. Any critical (+) item was not flown, or
2. The instructor was unable to sample sufficient examples of a given maneuver to assess the student's overall performance. If the flight profile is incomplete because too much time was dedicated to reattempting maneuvers or additional training, it should be graded UNSAT/Incomplete.

Note: The subsequent flight need only include maneuvers required to complete the check event.

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

- a. Any critical (+) item is below MIF, or
- b. More than two noncritical items were graded F/3 where G/4 is required, or
- c. Any maneuver is graded U/2.

(c) UNSAT Check Ride—Ground Operations. A check ride graded UNSAT solely for ground operations, like all UNSAT check rides, requires a progress check. The OPSO or CO will decide whether to perform the progress check as a ground evaluation, in the simulator, or in the aircraft.

(3) Progress Check Procedures

(a) Progress checks flown in the aircraft or simulator are holistic reviews of a student's proficiency, judgment, situational awareness, and overall ability to complete the mission. The intent of every Progress Check is to determine whether the student has the potential to reach the defined training standards of his/her current phase of training within the designated TTT, while demonstrating the potential to successfully complete intermediate and advanced training. All progress checks must meet MIF for the most recently completed block of training. Progress checks in the aircraft or simulator should focus on the student's weak areas and will normally be comprised of a representative cross-section of area and pattern maneuvers. All critical items do not need to be accomplished. Failed Progress Checks shall be documented on a pink version of the ATF for the failed event that generated the Progress Check. Refer to CNATRAINST 1500.4H for additional guidance and requirements.

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

1. IPC Triggers:

- a. Two consecutive UNSATs in a block.
- b. Three cumulative UNSATs in a block, but not including events coded XX84, XX85, XX86, XX87, or graded Marginal.
- c. An UNSAT check event (SXX90).
- 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.

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. An UNSAT IPC results in an FPC.
- c. Marginal is not a possible outcome of an IPC.

3. IPC instructors. Shall be senior 0-3 or above, and shall be designated in writing by the CO. The IPC is the student's first step in the attrition process, and IPCs should only be performed by experienced instructors who carry the CO's confidence that they have a complete understanding of standards-based grading, MNTS, MIF/CTS requirements of the syllabus, and the IPC/FPC process.

(c) FPC. The following defines when to conduct an FPC, FPC outcomes, and FPC instructors.

- 1. FPC 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, including academic failures.
 - e. Failure to meet SMS goals.
 - f. At the discretion of the CO when there is doubt regarding the student's potential to successfully complete. Refer to CNATRAINST 1500.4H for additional guidance.

- 2. Outcomes are:
 - a. Pass. Returns the student to normal syllabus flow. This will normally return the student to the event that triggered the FPC.

b. Fail. An UNSAT FPC results in an attrition recommendation to Commander, Training Air Wing SIX, and a TRB.

c. Marginal is not a possible outcome for an FPC.

3. FPC Instructors. Whenever possible, FPCs should be conducted by the CO or the Executive Officer (XO) in the CO's absence. In the event that neither the CO nor XO are available or qualified to instruct in the required stage, FPC Instructors shall be O-4 or above, and shall be designated in writing by the CO. An FPC conducted in a simulator shall be evaluated and graded by a qualified squadron FPC Instructor. A qualified Contract Simulator Instructor (CSI) shall be assigned to assist.

(d) Progress Check Counseling

1. Prior to an IPC (SXX88). The student's Class Advisor, Student Control Officer, or Operations Officer shall counsel the student on the Progress Check process and document counseling on a Supplemental ATF.

2. Upon Completion of an IPC. The IPC instructor shall counsel the student on the Progress Check process, his/her retention/attrition recommendations, and future courses of action. The IPC Instructor should also strive to ensure the student is coping with the Progress Check process appropriately, and notify appropriate squadron leadership immediately if there are any concerns. Post-IPC counseling shall be documented on the IPC ATF.

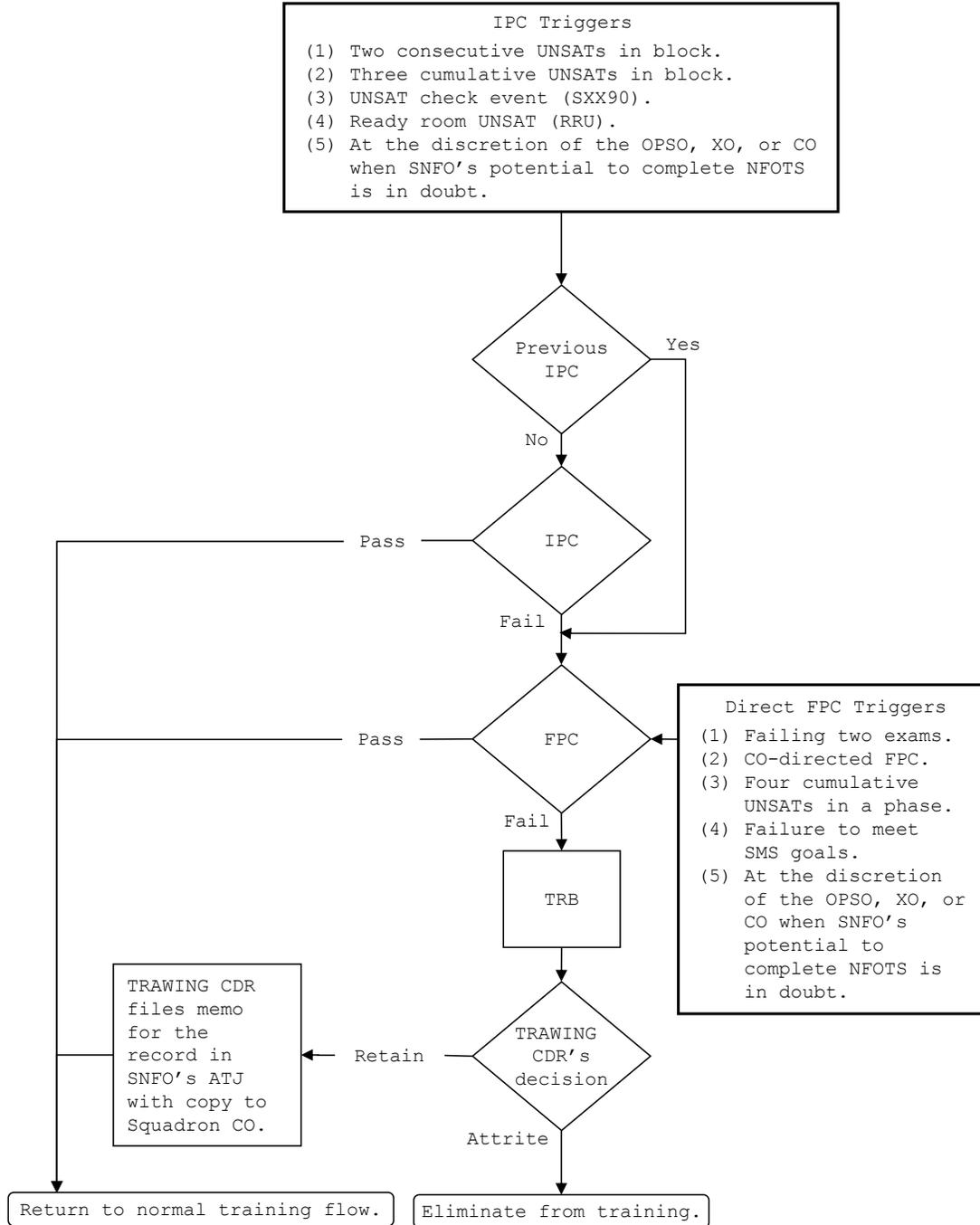
3. Prior to an FPC (SXX89). The FPC Instructor shall counsel the student on the Progress Check process. This counseling shall be documented on the FPC ATF.

4. Upon Completion of an FPC. The CO shall counsel the student. Counseling should consist of the Progress Check process, attrition/retention recommendations, and future courses of action. The CO shall document counseling on the FPC ATF, or on a Supplementary ATF if the CO was not the FPC Instructor.

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**NFOTS PROGRESS CHECK TRAINING REVIEW
 PROCESS**



11. Special Instructions and Restrictions

a. Flight Hour/Event Requirements and Restrictions

(1) Programmed Hours and Events. Programmed syllabus flight hours are 16.5 hours. Event lengths or SXX86, 87, 88, and 89 events will cause variation. Accomplish all syllabus events.

(2) Minimum Night Hours. N/A.

(3) Minimum Solo Hours. N/A.

(4) Minimum Instrument Hours (Actual or Simulated).
N/A.

(5) Maximum Daily Student Activities (Aircraft, Simulator). Students shall not exceed two activities during one duty day or three flights during cross-country flights.

(6) Minimum Student Turn-Times. One hour is required between debriefing of an event and the brief for a follow-on event. This does not apply to out-and-in or cross-country profiles; however, the instructor shall ensure adequate debrief and brief time is allocated.

(7) 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. Crew day shall not exceed 12 hours.

(8) 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.

b. Maneuver Demonstrations. Maneuver demonstrations will be accomplished as required.

c. Airspace Utilization. Conduct training events in designated areas. These events may be conducted as out-and-ins or cross-country flights with OPSO approval.

d. Aircraft/Simulator Interchangeability. Simulator events may not be substituted for flight events.

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Chapter II

Ground Training

1. Use of Self-Study (SS) Training Time. Ungraded OFT training events are provided for self-study event rehearsal and are designed to build a basic level of proficiency and confidence prior to the associated flight events to improve overall performance.

Blk #	Media	Title	Events	Hrs	Blk Name
G01	Class	Administration	2	2.25	ADMIN
1.	<u>Prerequisite.</u>	F4590 prior to G0102.			
2.	<u>Events</u>				
	G0101	Lect Intermediate Check-in		0.25	
	G0102	Lect Intermediate Checkout		2.00	
3.	<u>Syllabus Notes.</u>	None.			
4.	<u>Discuss Items.</u>	None.			

Blk #	Media	Title	Events	Hrs	Blk Name
F11	Class	Section Instrument Navigation Flight Support	3	9.5	SECINST

1. Prerequisites

- a. G0101 prior to F1101.
- b. F1101 prior to F1102-3 (in order).

2. Events

F1101	MIL	Intermediate Formation Ground Training		3.0	
F1102	SS	Section Instrument Navigation Familiarization Self-Study		5.0	
F1103	SS/ UTD	Section Instrument Navigation Event Rehearsal		1.5	

3. Syllabus Note. F1103 should be accomplished in the UTD without an instructor (formally scheduled event).

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
F12	Class	Section Visual Navigation Flight Support	2	13.5	SECVNAV

1. Prerequisite. F1103 prior to F1201-2 (any order).

2. Events

F1201	SS	Section Visual Navigation Chart Prep Self-Study	12.0
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F1202	SS/ UTD	Section Visual Navigation Event Rehearsal	1.5
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3. Syllabus Note. F1202 should be accomplished in the UTD without an instructor (formally scheduled event).

4. Discuss Items. None.

Chapter III

NATOPS Training

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

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Chapter IV

Contact Training

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

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Chapter V

Instrument Training

1. Seating. Students shall occupy the rear cockpit during this stage.
2. Matrices. There is a single matrix following the block description of the only block in this chapter. The purpose of this matrix is to provide the student and IP the easiest way to track progress, regression, and overall status in relation to the MIF.
3. Stage MIF. None.

Blk #	Media	Title	Events	Hrs	H/X
I44	T-6A	Instrument Navigation	2	3.0	1.5

1. Prerequisites

- a. F1201 (Section Visual Navigation Chart Prep Self-Study).
- b. F1202 (Section Visual Navigation Event Rehearsal).
- c. F4402 (Conditional prerequisite - required only if TACFORM stage was started first).

2. Syllabus Notes

- a. Flights in this block shall be flown as a single aircraft.
- b. Flights should be flown as out-and-in or cross-country events to the maximum extent possible.
- c. Students shall prepare and have available a DD-175 and flight log for both primary and alternate routes on each event.
- d. A minimum of four instrument approaches shall be performed in block to include at least one GPS and at least one RA/GCA.
- e. A minimum of five touch-and-goes in the VFR landing pattern shall be accomplished in block.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4401

T-6A type/equipment code, loading flight plan in the GPS, GPS enroute procedures, RAIM, RNAV/GPS approach procedures, bingo/divert profile and execution, and Carrier/VFR landing pattern and procedures.

I4402

Any EP and any limitation.

5. Block MIF

CTS REF	MANEUVER	I4402
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Composite Headwork/Situational Awareness	4+
4	BAR	4+
5	CRM/Crew Coordination	4+
6	NFO Responsibilities	4+
7	Mission Planning	4+
8	Brief/Debrief	4+
9	Ground Procedures	4+
10	Radio Procedures	4+
11	Departure	4+
12	In-Flight Checks	4+
13	Mission Ownership/Assertiveness	4+
14	In-Flight Planning	4+
15	Use of ATIS/PMSV/FSS	4+
16	In-Flight Briefings	4+
17	Fuel Management/Analysis	4+
18	In-Flight Computations	4+
19	Enroute Procedures	4+
20	Point-to-Point	4+
21	Instrument Turnpoint Procedures	4+
22	Arcing	4
23	Holding (VOR)	4
24	Holding (GPS)	4+
25	VOR Approach	4
26	GPS Approach	4+

MIF continued on next page.

CTS REF	MANEUVER	I4402
27	Localizer Approach	4
28	ILS Approach	4
29	Circling Approach	4
30	RA/GCA	4+
31	Missed Approach	4+
41	Landing Pattern	4+

Chapter VI

Navigation Training

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

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Chapter VII

Formation Training

1. Seating. Student shall occupy the rear cockpit during this stage.
2. Matrices. The following matrix is an overview of the entire Section Stage. The purpose of this matrix is to provide the student and IP the easiest way to track progress, regression, and overall status in relation to the MIF. In addition, there is a single matrix following each block description throughout this chapter.
3. Stage MIF

 Check Ride Event

SECTION STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	F4204	F4301	F4403	F4590
1	General Knowledge/Procedures	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+
3	Composite Headwork/Situational Awareness	4+	3+	4+	4+
4	BAR	4+	4+	4+	4+
5	CRM/Crew Coordination	4+	4+	4+	4+
6	NFO Responsibilities	4+	4+	4+	4+
7	Mission Planning	4+	4+	4+	4+
8	Brief/Debrief	4+	3+	4+	4+
9	Ground Procedures	4+	4+	4+	4+
10	Radio Procedures	4+	4+	4+	4+
11	Departure	4+	4+	4+	4+
12	In-Flight Checks	4+	4+	4+	4+

MIF continued on next page.

SECTION STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	F4204	F4301	F4403	F4590
13	Mission Ownership/Assertiveness	4+	4+	4+	4+
14	In-Flight Planning	4+	4+	4+	4+
15	Use of ATIS/PMSV/FSS	4+	4+	4+	4+
16	In-Flight Briefings	4+	4+	4+	4+
17	Fuel Management/Analysis	4+	4+	4+	4+
18	In-Flight Computations	4+			
19	Enroute Procedures	4+			
20	Point-to-Point	4+			
21	Instrument Turnpoint Procedures	4+			
22	Arcing	4			
23	Holding (VOR)	4			
24	Holding (GPS)	4			
25	VOR Approach	4			
26	GPS Approach	4			
27	Localizer Approach	4			
28	ILS Approach	4			
29	Circling Approach	4			
30	RA/GCA	4			
31	Missed Approach	4+			
32	Taxi and Marshal	4+	4+	4+	4+
33	Formation Takeoff	3+	3	4+	4+
34	Wingman Communication	3+	3+	4+	4+
35	Section Management/Flight Leadership	3+	3	4+	4
36	Wingman Responsibilities	3+	3+	4+	4
37	Rendezvous	3+	3+	4+	4+
38	Underrun	3	3+	4	4

MIF continued on next page.

SECTION STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	F4204	F4301	F4403	F4590
39	Section Approach Procedures	3+	3	4+	4
40	Section Break	3	3	4+	4
41	Landing Pattern	4+	4	4+	4
42	SUA/MTR Entry/Exit Procedures		4	4+	4+
43	NAV/Geographic Rendezvous		3+	4	4
44	Visual Lookout		3+	4+	4+
45	Lost Sight Exercise		3+		
46	G-warm		3+	4+	4+
47	Tactical Formation/Maneuvering		3+	3+	3+
48	Tail-Chase/Pursuit Curves		3+		
49	VNAV Chart			4+	4+
50	Turnpoint Identification			4+	4+
51	VNAV Turnpoint Procedures			4+	4+
52	Checkpoint Utilization/Correlation			4+	4+
53	Hazard Calls			4+	4+
54	Course Analysis/Corrections			4+	4+
55	Timing Analysis/Speed Corrections			4+	4+
56	Altitude Selection/Compliance			4+	4+
57	Wind Analysis/Compensation			4+	4+
58	Target Acquisition			4+	4+
59	Section Target Attack			3+	3+

Blk #	Media	Title	Events	Hrs	H/X
F42	T-6A	Section Instrument Navigation	4	6.0	1.5

1. Prerequisite. I4402.

2. Syllabus Notes

a. Flights in this block shall be flown in two-ship formation.

b. Flights should be flown as out-and-in or cross-country events to the maximum extent possible.

c. Students shall prepare and have available a DD-175 and flight log for both primary and alternate routes on each event.

d. Section Management/Flight Leadership shall only be graded for the student performing from the lead aircraft during the flight event.

e. Specific instrument approach maneuver items (VOR, GPS, ILS, LOC, RA/GCA) shall be graded only if the student performed the approach from the lead aircraft. If performing an instrument approach from either the lead or wing aircraft, the student shall be graded on the maneuver item entitled "Section Approach Procedures."

f. A minimum of four instrument approaches shall be performed as lead and four approaches shall be performed as wing in block.

g. A minimum of five touch-and-goes in the VFR landing pattern shall be accomplished in block.

3. Special Syllabus Requirements. None.

4. Discuss Items

F4201

OPNAVINST 3710 formation takeoff minimums, any formation communication procedure, section crew coordination, underrun (NFO responsibilities), section management on instrument approach, section missed approach procedures, and OPNAVINST 3710 formation approach minimums.

F4202

Any formation EP and any limitation.

F4203

Section fuel management, lost sight procedures (under IFR clearance), lead change, individual clearances for departure, individual clearances for recovery, and SOP minimum landing interval.

F4204

Any EP and any limitation.

5. Block MIF

CTS REF	MANEUVER	F4204
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Composite Headwork/Situational Awareness	4+
4	BAR	4+
5	CRM/Crew Coordination	4+
6	NFO Responsibilities	4+
7	Mission Planning	4+
8	Brief/Debrief	4+
9	Ground Procedures	4+
10	Radio Procedures	4+
11	Departure	4+

MIF continued on next page.

CTS REF	MANEUVER	F4204
12	In-Flight Checks	4+
13	Mission Ownership/Assertiveness	4+
14	In-Flight Planning	4+
15	Use of ATIS/PMSV/FSS	4+
16	In-Flight Briefings	4+
17	Fuel Management/Analysis	4+
18	In-Flight Computations	4+
19	Enroute Procedures	4+
20	Point-to-Point	4+
21	Instrument Turnpoint Procedures	4+
22	Arcing	4
23	Holding (VOR)	4
24	Holding (GPS)	4
25	VOR Approach	4
26	GPS Approach	4
27	Localizer Approach	4
28	ILS Approach	4
29	Circling Approach	4
30	RA/GCA	4
31	Missed Approach	4+
32	Taxi and Marshal	4+
33	Formation Takeoff	3+
34	Wingman Communication	3+
35	Section Management/Flight Leadership	3+
36	Wingman Responsibilities	3+
37	Rendezvous	3+
38	Underrun	3
39	Section Approach Procedures	3+
40	Section Break	3
41	Landing Pattern	4+

Blk #	Media	Title	Events	Hrs	H/X
F43	T-6A	Section Tactical Formation	1	1.5	1.5

1. Prerequisites

- a. F1201 (Section Visual Navigation Chart Prep Self-Study).
- b. F1202 (Section Visual Navigation Event Rehearsal).
- c. F4204 (Conditional prerequisite - required only if Instrument stage was started first).

2. Syllabus Notes

- a. Students will plan, brief, execute, and debrief a section tactical formation event.
- b. Students shall direct/accomplish a NAV/geographic rendezvous for the initial joinup.
- c. The lead student during this event will brief/debrief flight admin and conduct to include safety-of-flight, tactical admin, and the sequence of maneuvers. The lead student will utilize the wingman student appropriately in the brief/debrief and for flight planning and brief preparation.
- d. "Section Management/Flight Leadership" shall only be graded for the student performing from the lead aircraft during the flight event.
- e. If performing an instrument approach from either the lead or wing aircraft, the student shall be graded on the maneuver item entitled "Section Approach Procedures."

3. Special Syllabus Requirements. None.

4. Discuss Items. NAV/geographic rendezvous, lost sight procedures (under VFR clearance), section tactical formation procedures, tail-chase/pursuit curves, and underrun.

5. Block MIF

CTS REF	MANEUVER	F4301
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Composite Headwork/Situational Awareness	3+
4	BAR	4+
5	CRM/Crew Coordination	4+
6	NFO Responsibilities	4+
7	Mission Planning	4+
8	Brief/Debrief	3+
9	Ground Procedures	4+
10	Radio Procedures	4+
11	Departure	4+
12	In-Flight Checks	4+
13	Mission Ownership/Assertiveness	4+
14	In-Flight Planning	4+
15	Use of ATIS/PMSV/FSS	4+
16	In-Flight Briefings	4+
17	Fuel Management/Analysis	4+
32	Taxi and Marshal	4+
33	Formation Takeoff	3
34	Wingman Communication	3+
35	Section Management/Flight Leadership	3
36	Wingman Responsibilities	3+
37	Rendezvous	3+
38	Underrun	3+
39	Section Approach Procedures	3

MIF continued on next page.

CTS REF	MANEUVER	F4301
40	Section Break	3
41	Landing Pattern	4
42	SUA/MTR Entry/Exit Procedures	4
43	NAV/Geographic Rendezvous	3+
44	Visual Lookout	3+
45	Lost Sight Exercise	3+
46	G-warm	3+
47	Tactical Formation/Maneuvering	3+
48	Tail-Chase/Pursuit Curves	3+

Blk #	Media	Title	Events	Hrs	H/X
F44	T-6A	Section Visual Navigation	3	4.5	1.5

1. Prerequisites

- a. F4301 prior to F4401-2 (in order).
- b. F4402 and F4204 prior to F4403.

2. Syllabus Notes

a. Students will plan, brief, execute, and debrief a section visual navigation event.

b. Students shall lead at least one event in block.

c. Students shall accomplish at least two section instrument approaches in block.

d. Each event in block shall be accomplished on a low-altitude MTR using visual navigation procedures at prescribed route altitudes, no lower than 500 feet AGL.

e. Timing will involve real-world times to the target.

f. The lead student will brief/debrief flight admin and conduct to include safety-of-flight, tactical admin, and the sequence of maneuvers for that specific event. The lead student will utilize the wingman student appropriately in the brief/debrief and for flight planning and brief preparation. If conducting an out-and-in, during which one student will lead the first event and the other student will lead the second event, the lead student will brief/debrief flight admin and conduct for the respective event that he/she leads.

g. "Section Management/Flight Leadership" shall only be graded for the student performing from the lead aircraft during the flight event.

h. If performing an instrument approach from either the lead or wing aircraft, the student shall be graded on the maneuver item entitled "Section Approach Procedures."

i. A minimum of one instrument approach shall be performed as lead and one approach shall be performed as wing in block.

j. A minimum of five touch-and-goes in the VFR landing pattern shall be accomplished in block.

3. Special Syllabus Requirements. None.

4. Discuss Items

F4401

Low-altitude flight safety, crew coordination for low-altitude operations, wingman responsibilities on the MTR, basic section low-altitude target attacks, and target attack abort parameters.

F4402

Any EP and any limitation.

F4403

Real-world strike planning and execution and timing control using real-world time.

5. Block MIF

CTS REF	MANEUVER	F4403
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Composite Headwork/Situational Awareness	4+
4	BAR	4+
5	CRM/Crew Coordination	4+
6	NFO Responsibilities	4+
7	Mission Planning	4+
8	Brief/Debrief	4+
9	Ground Procedures	4+
10	Radio Procedures	4+
11	Departure	4+
12	In-Flight Checks	4+
13	Mission Ownership/Assertiveness	4+

MIF continued on next page.

CTS REF	MANEUVER	F4403
14	In-Flight Planning	4+
15	Use of ATIS/PMSV/FSS	4+
16	In-Flight Briefings	4+
17	Fuel Management/Analysis	4+
32	Taxi and Marshal	4+
33	Formation Takeoff	4+
34	Wingman Communication	4+
35	Section Management/Flight Leadership	4+
36	Wingman Responsibilities	4+
37	Rendezvous	4+
38	Underrun	4
39	Section Approach Procedures	4+
40	Section Break	4+
41	Landing Pattern	4+
42	SUA/MTR Entry/Exit Procedures	4+
43	NAV/Geographic Rendezvous	4
44	Visual Lookout	4+
46	G-warm	4+
47	Tactical Formation/Maneuvering	3+
49	VNAV Chart	4+
50	Turnpoint Identification	4+
51	VNAV Turnpoint Procedures	4+
52	Checkpoint Utilization/ Correlation	4+
53	Hazard Calls	4+
54	Course Analysis/Corrections	4+
55	Timing Analysis/Speed Corrections	4+
56	Altitude Selection/Compliance	4+
57	Wind Analysis/Compensation	4+
58	Target Acquisition	4+
59	Section Target Attack	3+

Blk #	Media	Title	Events	Hrs	H/X
F45	T-6A	Section Visual Navigation Check Ride	1	1.5	1.5

1. Prerequisite. F4403.

2. Syllabus Notes

a. Students will plan, brief, execute, and debrief a section visual navigation event.

b. Emphasis will be placed on crew coordination, NFO responsibilities, and the integration of visual navigation procedures.

c. This event shall be accomplished on a low-altitude MTR using visual navigation procedures at prescribed route altitudes, no lower than 500 feet AGL.

d. Timing will involve real-world times to the target.

e. The lead student will brief/debrief flight admin and conduct to include safety-of-flight, tactical admin, and the sequence of maneuvers. The lead student will utilize the wingman student appropriately in the brief/debrief and for flight planning and brief preparation. If conducting this event as the second flight of an out-and-in, during which one student will lead the first event and the other student will lead the second event, the lead student will brief/debrief flight admin and conduct for the respective event that he/she leads.

f. "Section Management/Flight Leadership" shall only be graded for the student performing from the lead aircraft during the flight event.

g. If performing an instrument approach from either the lead or wing aircraft, the student is to be graded on the maneuver item entitled "Section Approach Procedures."

h. A minimum of one instrument approach shall be accomplished on this event.

3. Special Syllabus Requirements. None.
4. Discuss Items. Any previous discuss item, any EP, and any limitation.
5. Block MIF

CTS REF	MANEUVER	F4590
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Composite Headwork/Situational Awareness	4+
4	BAR	4+
5	CRM/Crew Coordination	4+
6	NFO Responsibilities	4+
7	Mission Planning	4+
8	Brief/Debrief	4+
9	Ground Procedures	4+
10	Radio Procedures	4+
11	Departure	4+
12	In-Flight Checks	4+
13	Mission Ownership/Assertiveness	4+
14	In-Flight Planning	4+
15	Use of ATIS/PMSV/FSS	4+
16	In-Flight Briefings	4+
17	Fuel Management/Analysis	4+
32	Taxi and Marshal	4+
33	Formation Takeoff	4+
34	Wingman Communication	4+
35	Section Management/Flight Leadership	4
36	Wingman Responsibilities	4
37	Rendezvous	4+

MIF continued on next page.

CTS REF	MANEUVER	F4590
38	Underrun	4
39	Section Approach Procedures	4
40	Section Break	4
41	Landing Pattern	4
42	SUA/MTR Entry/Exit Procedures	4+
43	NAV/Geographic Rendezvous	4
44	Visual Lookout	4+
46	G-warm	4+
47	Tactical Formation/Maneuvering	3+
49	VNAV Chart	4+
50	Turnpoint Identification	4+
51	VNAV Turnpoint Procedures	4+
52	Checkpoint Utilization/ Correlation	4+
53	Hazard Calls	4+
54	Course Analysis/Corrections	4+
55	Timing Analysis/Speed Corrections	4+
56	Altitude Selection/Compliance	4+
57	Wind Analysis/Compensation	4+
58	Target Acquisition	4+
59	Section Target Attack	3+

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Chapter VIII

Tactical Training

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

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Chapter IX

Course Training Standards

1. Purpose. These standards outline the tasks and proficiency required of SNFOs during the Intermediate phase.
2. Student Duties and Responsibilities
 - a. Plan the mission.
 - b. Ensure the aircraft is preflighted, inspected, and equipped for the assigned mission.
 - c. Operate the aircraft to accomplish the mission using sound judgment and airmanship.
3. General Standards
 - a. Achieve training standards for Visual Meteorological Condition (VMC) maneuvers in conjunction with visual clearing.
 - b. Unless otherwise specified, use Basic Airwork Recognition (BAR) standards for all items with altitude, airspeed or heading parameters.
 - c. "Standard" equates to **good** (G/4).
 - d. Momentary deviations outside CTSs that do not compromise flight safety are acceptable if subsequent corrections are timely.
 - e. Procedural knowledge and application must comply with applicable directives and allow efficient mission accomplishment. If individual tasks require pre-mission planning, the standards from **Mission Planning** apply.
4. Execution. The MIF regulates student progression to meet required standards prior to phase completion. Instructor pilots 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. Beginning with Instruments, each stage's MIF table is listed followed by the course training standards which are introduced in that stage. Some of the standards are unique to that stage, while others may apply to later stages. Once the standard for a graded item has been established, it will not be repeated in the Course Training Standards list of later stages, but remains available to be graded.

7. Course Training Standards

UNIVERSALLY GRADED ITEMS

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 with minimal deficiencies not pertaining to safety of flight.

BEHAVIOR STATEMENT	STANDARDS
2. Emergency Procedures	
<ul style="list-style-type: none"> ● Perform critical action emergency procedures. ● Maintain in-depth knowledge of all NATOPS emergency procedures. ● Utilize the Pocket Checklist (PCL) IAW NATOPS and FTI guidelines. 	<ul style="list-style-type: none"> ● Correctly analyzes situation given real or hypothetical scenarios. ● Recites critical action steps from memory without error (100 percent boldface accuracy). ● Is proficient with all information contained in the PCL; is able to utilize the checklist in a correct and timely manner.
3. Headwork/Situational Awareness	
<ul style="list-style-type: none"> ● Comply with the FTI, SOP, and NATOPS while maintaining Situational Awareness (SA) commensurate with safety-of-flight and mission objectives. 	<ul style="list-style-type: none"> ● Has knowledge of all rules and regulations and carries out all duties with minimum supervision. ● Foresees and avoids possible difficulties by making recommendations that enhance the situation and/or overall mission effectiveness. ● Remains alert and oriented during all phases of the event. ● Maintains overall awareness with regard to fuel state, aircraft configuration, traffic in vicinity of own ship, and dynamic weather conditions.
4. Basic Airwork Recognition	
<ul style="list-style-type: none"> ● Monitor/direct aircraft control and perform an instrument/composite scan as appropriate to maintain planned navigation parameters, ATC clearances and assigned altitude, airspeed, and heading during flight. 	<ul style="list-style-type: none"> ● Recognizes airwork deviations in a timely manner based on the phase of flight, not to exceed 30 seconds (enroute phase) and effectively directs corrections to: <ul style="list-style-type: none"> ▶ Maintain aircraft within 100 feet, 10 KIAS, $\pm 5^\circ$ of assigned altitudes, speeds, and headings, respectively. ▶ Initiate/direct level off from all climbs/descents.

BEHAVIOR STATEMENT	STANDARDS
5. Crew Resource Management/Crew Coordination	
<ul style="list-style-type: none"> ● Use available crew and cockpit resources to minimize workload and enhance SA. ● Effectively communicate mission essential information between crewmembers. ● Build crew awareness with timely and effective descriptive comm. 	<ul style="list-style-type: none"> ● Properly identifies crew roles, responsibilities, and expectations. ● Improves mission effectiveness by minimizing crew preventable errors and optimizing crew coordination. ● Demonstrates both leadership and team member skills. ● Demonstrates proper level of assertiveness for the situation.
6. NFO Responsibilities	
<ul style="list-style-type: none"> ● Accomplish required in-flight duties. 	<ul style="list-style-type: none"> ● Performs appropriate in-flight checklists, when required, per NATOPS and FTI. ● Gives proper takeoff calls, altitude warning calls and landing rollout calls per FTI to 90 percent accuracy.
7. Mission Planning	
<ul style="list-style-type: none"> ● Perform mission planning to include takeoff, climb, enroute, descent, approach, and landing data. ● Prepare chart and mission material. ● Obtain applicable weather, bird activity, and NOTAMs. ● Plan alternate execution. ● Prepare flight log/DD-175, as required. ● Adjust mission's profile based on real-world/weather concerns. 	<ul style="list-style-type: none"> ● Correctly interprets a valid Wx briefing/information for all flights. ● Completes DD-175 with 100 percent accuracy. ● Completes Jet Log with 90 percent accuracy, as required. ● Reviews FLIP documents, NOTAMs, and other applicable flight information. ● Has all required materials (Wx brief, FLIPs, NOTAMs) prior to brief. ● Adjusts tactical admin based on weather forecast and appropriate controlling documents. ● Ensures SUA/MTR scheduled.

BEHAVIOR STATEMENT	STANDARDS
8. Brief/Debrief	
<ul style="list-style-type: none"> ● Prepare for the brief, and as required, brief the flight in preparation for the mission. ● During debrief, recall flight progression and play an active role in the mission/aircrew evaluation. 	<ul style="list-style-type: none"> ● Briefs the flight in accordance with the squadron briefing guide for the event. ● Demonstrates proficient knowledge of discuss items with minimal deficiencies. ● Demonstrates knowledge of all aspects related to conduct of flight event. ● Recalls specifics of the mission and is able to accurately assess aircrew performance.
9. Ground Procedures	
<ul style="list-style-type: none"> ● Provide astute backup for pilot during all taxi operations. ● Begin when departing for the aircraft and end when cleared for takeoff. ● Begin again when aircraft clears the runway and end when Before Leaving Aircraft Checklist is complete. 	<ul style="list-style-type: none"> ● Correctly performs aircraft inspections, and all ground checklists, procedures, and required briefs IAW NATOPS, FTI, and SOPs. ● Monitors engine instruments for proper indications during start. ● Safely directs/monitors the taxi of the aircraft via local procedures, using applicable airfield diagram as a reference.

BEHAVIOR STATEMENT	STANDARDS
10. Radio Procedures	
<ul style="list-style-type: none"> ● Effectively communicate via the use of UHF/VHF radios and ICS as required. ● Use standard terminology IAW AIM/FAR and FTIs. 	<ul style="list-style-type: none"> ● Understands and responds to 90 percent of incoming calls. ● Communicates clearly and concisely with appropriate agencies using standard military and FAA terminology. ● Makes timely transmissions without stepping on other radio calls. ● Is able to discuss or perform NORDO procedures, as required. ● If lead, executes proper formation lead communication procedures IAW the applicable FTI.
11. Departure	
<ul style="list-style-type: none"> ● Begins when climb airspeed is established and ends when published departure is complete or established in assigned working area. ● If no published departure, ends when initiating pitch change for level-off. 	<ul style="list-style-type: none"> ● Directs compliance with ATC/departure/flight plan clearances. ● Performs an operations check after making radio contact with Departure Control, safety of flight permitting.
12. In-Flight Checks	
<ul style="list-style-type: none"> ● Accomplish in-flight checks IAW NATOPS, FTI, and SOP. 	<ul style="list-style-type: none"> ● Identifies nearest divert field. ● Performs operations check at least every 20 minutes.

BEHAVIOR STATEMENT	STANDARDS
13. Mission Ownership/Assertiveness	
<ul style="list-style-type: none"> ● Exhibit aviation leadership. ● Take charge of the mission in all aspects of planning and execution. 	<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 reasoned alternatives to mission plan due to evolving and dynamic circumstances.
14. In-Flight Planning	
<ul style="list-style-type: none"> ● Plan and execute required maneuvers and/or flight profile IAW all applicable instructions. ● Understand current and required position. ● Course and destination deviation as appropriate for weather, fuel, or emergencies. 	<ul style="list-style-type: none"> ● Adjusts mission profile for external factors (weather, traffic, diverts, etc.). ● Maintains positional awareness using ground references, navigational aids, VFR charts, or FLIPs. ● Contacts appropriate controller and requests deviations in a timely manner IAW OPNAVINST 3710.7U.

BEHAVIOR STATEMENT	STANDARDS
15. Use of ATIS/PMSV/FSS	
<ul style="list-style-type: none"> ● Use ATIS/PMSV to update destination conditions IAW the FTI. ● Use FSS as required to open, change, and close flight plans. 	<ul style="list-style-type: none"> ● Checks ATIS prior to contacting destination approach control. ● Updates destination and alternate weather with PMSV/AWOS/FSS enroute, when required. ● Contacts FSS to: <ul style="list-style-type: none"> ▶ Open flight plans after departure. ▶ Change flight plans enroute. ▶ Close flight plans after landing.
16. In-Flight Briefings	
<ul style="list-style-type: none"> ● Accomplish in-flight briefings IAW the FTI. 	<ul style="list-style-type: none"> ● Provides takeoff brief, departure brief, holding brief, field brief, DRAFT report (as required), approach brief, and missed approach/climbout instructions when required using format delineated in the FTI with 90 percent accuracy.

BEHAVIOR STATEMENT	STANDARDS
17. Fuel Management/Analysis	
<ul style="list-style-type: none"> ● Maintain fuel awareness throughout flight. ● Determine fuel state and any fuel consumption trends. ● Calculate Joker/Bingo/MCF. ● During the course of the event, analyze actual to preflight planned fuel at the IAF to assess mission feasibility. ● Monitor fuel status for section and direct deviations, if needed, to accomplish mission goals and land with adequate fuel reserves IAW OPNAVINST 3710.7U and SOP. 	<ul style="list-style-type: none"> ● Checks fuel state at least every 20 minutes. ● Calculates Joker/Bingo/MCF IAW FTI ± 30 pounds. ● Compares fuel state to MCF at each turnpoint and correctly states any trends in fuel consumption. ● Makes recommendations to mission execution based on fuel state to ensure OPNAVINST 3710.7U/TW-6/Squadron requirements for MCF. ● Lead: <ul style="list-style-type: none"> ▶ Conducts fuel checks as required by FTI or every 20 minutes. ▶ Ensures that flight is conducted IAW SOP/NATOPS/FTI fuel requirements. ● Lead/wing: <ul style="list-style-type: none"> ▶ Recognizes and calls JOKER/BINGO fuel as necessary with 100 percent accuracy. ▶ Makes recommendations to continue visual route if applicable or return early to destination without error.

INSTRUMENT NAVIGATION

BEHAVIOR STATEMENT	STANDARDS
18. In-Flight Computations	
<ul style="list-style-type: none"> ● Compute IAW the FTI: <ul style="list-style-type: none"> ▶ Ground speed. ▶ ETE (to turnpoints). ▶ Fuel at destination IAF. 	<ul style="list-style-type: none"> ● Computes: <ul style="list-style-type: none"> ▶ Ground speed ± 12 knots. ▶ ETA ± 1 minute. ▶ Fuel at destination IAF within ± 30 pounds of instructor calculations.

BEHAVIOR STATEMENT	STANDARDS
19. Enroute Procedures	
<ul style="list-style-type: none"> ● Perform procedures while flying between departure transition point and destination. ● Identify an intersection using appropriate NAVAID(s). ● Identify station/waypoint passage IAW FTI. ● Intercept a radial and track inbound or outbound from a station. ● Properly manipulate EFIS Control Panel. 	<ul style="list-style-type: none"> ● Maintains positional awareness using ground references, navigational aids, VFR charts, or FLIPs. ● Determines approximate wind direction $\pm 30^\circ$ and ± 15 knots and maintains proper crab angle $\pm 5^\circ$. ● Gives position reports as required. ● Leads turns when applicable IAW FTI. ● Maintains within 2 NM of course centerline between all NAVAIDs and fixes. ● Correctly identifies NAVAID station, GPS waypoint, or intersection passage.
20. Point-to-Point	
<ul style="list-style-type: none"> ● Proceed direct to an assigned fix using PTP procedures. 	<ul style="list-style-type: none"> ● Expeditionously directs an initial heading $\pm 30^\circ$ to the fix. ● Continuously updates heading to: <ul style="list-style-type: none"> ▶ Avoid large ($>20^\circ$) heading changes within two minutes prior. ▶ Arrive within 2 miles of desired point.
21. Instrument Turnpoint Procedures	
<ul style="list-style-type: none"> ● Perform instrument turnpoint calls. 	<ul style="list-style-type: none"> ● Makes appropriate two minutes prior, mark on top, and wings level calls using proper format and terminology IAW FTI with 90 percent accuracy. ● Gives a wind-corrected outbound heading for a course, when able. ● Updates navigation aids appropriately.

BEHAVIOR STATEMENT	STANDARDS
22. Arcing	
<ul style="list-style-type: none"> ● Direct per FTI: <ul style="list-style-type: none"> ▶ VOR/DME arcing. ▶ Arc-to-radial intercepts. ▶ Radial-to-arc intercepts. 	<ul style="list-style-type: none"> ● Maintains the arc ± 0.5 DME. ● Calculates lead points IAW FTI to join: <ul style="list-style-type: none"> ▶ Arc ± 0.5 DME. ▶ Radial $\pm 3^\circ$.
23. Holding (VOR)	
<ul style="list-style-type: none"> ● Direct VOR holding IAW the FTI. 	<ul style="list-style-type: none"> ● Computes proper entry turn. ● Directs holding airspeed three minutes or less from the holding fix. ● Establishes and maintains aircraft within holding airspace. ● Properly calculates and applies drift corrections IAW the FTI. ● Properly calculates and applies timing corrections IAW the FTI.
24. Holding (GPS)	
<ul style="list-style-type: none"> ● Direct GPS holding IAW the FTI. 	<ul style="list-style-type: none"> ● Properly sets GPS for holding. ● Computes proper entry turn. ● Directs holding airspeed three minutes or less from the holding fix. ● Establishes and maintains aircraft within holding airspace. ● Properly calculates and applies drift corrections IAW the FTI.

BEHAVIOR STATEMENT	STANDARDS
25. VOR Approach	
<ul style="list-style-type: none"> ● Direct a VOR approach IAW the FTI. 	<ul style="list-style-type: none"> ● IAF to FAF maintains course ± 1 dot or valid intercept. ● Properly directs the pilot to slow and take BAC IAW the FTI. ● By the FAF (when depicted) or initiating descent to MDA, completes landing checklist. ● Final: <ul style="list-style-type: none"> ▶ Maintains ± 1 dot of desired course. ▶ Reaches and maintains MDA +100/-0 feet. ▶ Ensures missed approach/climbout instructions briefed prior to the MAP. ● Properly calculates and applies backup timing at the FAF. ● Properly identifies VDP when published. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the MDA/MAP. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.

BEHAVIOR STATEMENT	STANDARDS
26. GPS Approach	
<ul style="list-style-type: none"> ● Direct a GPS approach IAW the FTI. 	<ul style="list-style-type: none"> ● Initial approach waypoint to FAWP: maintains course ± 0.25 NM or valid intercept. ● At 3 NM from FAWP, ensures FAWP is active waypoint. ● At 2 NM from FAWP, ensures GPS is in active mode. ● By the FAWP: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Ensures approach goes active prior to descent from FAWP. ● Final: <ul style="list-style-type: none"> ▶ Maintains ± 1 dot of desired course. ▶ Reaches and maintains MDA +100/-0 feet. ▶ Ensures missed approach/climbout instructions briefed prior to the MAP. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the MDA/MAP. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.

BEHAVIOR STATEMENT	STANDARDS
27. Localizer Approach	
<ul style="list-style-type: none"> ● Direct a localizer approach IAW the FTI. 	<ul style="list-style-type: none"> ● By the FAF or initiating descent to MDA, completes landing checklist. ● Final: <ul style="list-style-type: none"> ▶ Maintains ±1 dot of desired course localizer. ▶ Reaches and maintains MDA +100/-0 feet. ▶ Begins backup timing at the FAF when applicable. ▶ Ensures missed approach/climbout instructions briefed prior to the MAP. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the MDA/MAP. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.
28. ILS Approach	
<ul style="list-style-type: none"> ● Direct an ILS approach IAW the FTI. 	<ul style="list-style-type: none"> ● Prior to initiating descent to DA, completes landing checklist. ● Final: <ul style="list-style-type: none"> ▶ Maintains ±1 dot of localizer course. ▶ Maintains ±1 dot on glideslope. ▶ Begins backup timing for the localizer approach when applicable. ▶ Ensures missed approach/climbout instructions briefed prior to the DA. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the DA. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.

BEHAVIOR STATEMENT	STANDARDS
29. Circling Approach	
<ul style="list-style-type: none"> ● Direct a circling maneuver to the landing runway IAW the FTI. 	<ul style="list-style-type: none"> ● Provides the pilot proper instructions to establish the aircraft into the circling maneuver for the landing runway. ● Selects appropriate MDA for aircraft category. ● Ensures aircraft is within obstruction clearance radius for aircraft category before commencing circling maneuver. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions. ● Maintains airspeed +10/-0 KIAS of circling airspeed. ● Maintains altitude at circling minimums -0 feet.
30. Radar Approach/Ground-Controlled Approach	
<ul style="list-style-type: none"> ● Direct the pilot, as needed, to properly comply with the FTI parameters of a PAR or ASR approach. 	<ul style="list-style-type: none"> ● Responds quickly and correctly to controller instructions. ● Ensures lost communication and missed approach/climbout instructions are received prior to DA or MAP. ● By glideslope intercept or descent to the MDA, completes landing checklist. ● Determines if the aircraft is in a position to execute a safe landing on reaching the DA or MDA/MAP. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions. ● Maintains airspeed +5/-0 KIAS on final. ● Maintains heading $\pm 3^\circ$.

BEHAVIOR STATEMENT	STANDARDS
31. Missed Approach	
<ul style="list-style-type: none"> ● Direct a missed approach per the FTI. 	<ul style="list-style-type: none"> ● Directs appropriate missed approach procedure when field not in sight and, <ul style="list-style-type: none"> ▶ Nonprecision: <ul style="list-style-type: none"> ▪ Inside FAF and full scale CDI deflection. ▪ At specified MAP DME. ▪ At expiration of timing in the absence of DME. ▶ Precision, first of: <ul style="list-style-type: none"> ▪ DA. ▪ Controller-directed. ▶ Or, not in position for safe landing.

SECTION INSTRUMENT NAVIGATION

BEHAVIOR STATEMENT	STANDARDS
32. Taxi and Marshal	
<ul style="list-style-type: none"> ● Perform taxi and marshal flight. ● Perform formation ground procedures. 	<ul style="list-style-type: none"> ● Performs IAW FTI and local procedures. ● Lead monitors wingman's position. ● Performs appropriate section or division ground procedures as lead or wingman.
33. Formation Takeoff	
<ul style="list-style-type: none"> ● Perform section or interval takeoff. 	<ul style="list-style-type: none"> ● Performs IAW FTI and SOP. ● Lead: <ul style="list-style-type: none"> ▶ Monitors wingman. ▶ Directs appropriate type of takeoff for weather/runway conditions IAW FTI. ● Wing: Advises IP of airspeeds, engine and gear status. ● Performs responsibilities based on formation position IAW FTI and SOP.

BEHAVIOR STATEMENT	STANDARDS
34. Wingman Communication	
<ul style="list-style-type: none"> ● Safely and effectively communicate with wingman using radio/visual/aircraft. 	<ul style="list-style-type: none"> ● Correctly uses and interprets hand signals. ● Performs IAW FTI to 90 percent accuracy.
35. Section Management/Flight Leadership	
<ul style="list-style-type: none"> ● Plan and execute an IFR flight plan (when applicable) as a section. ● Plan and execute a parade/tactical formation sequence of maneuvers (when applicable). ● Understand and direct required section positioning. ● Accomplish/direct ADMIN/TAC ADMIN tasks in a timely manner. 	<ul style="list-style-type: none"> ● Lead <ul style="list-style-type: none"> ▶ Maintains section in compliance with IFR flight plan, ATC clearances, prebriefed approaches, etc. ▶ Maintains section inside the confines of assigned working area (when applicable). ▶ Efficiently sequences and directs maneuvers (when applicable). ▶ Adjusts mission profile for external factors considering wingman (weather, terrain, traffic, etc.).
36. Wingman Responsibilities	
<ul style="list-style-type: none"> ● Monitor for own-ship proper section positioning. ● Monitor for proper navigation and compliance with assigned clearance/airspace restrictions and safety-of-flight. 	<ul style="list-style-type: none"> ● Wing <ul style="list-style-type: none"> ▶ Advises IP of deviations from lead-directed position and directs corrections over ICS prior to flight deviating from assigned clearance/airspace or safety-of-flight as required. ▶ Maintains positional and situational awareness so as to be able to assume the lead at any point during the mission.

BEHAVIOR STATEMENT	STANDARDS
37. Rendezvous	
<ul style="list-style-type: none"> ● Reform to parade while lead is maintaining constant heading or in constant AOB turn. 	<ul style="list-style-type: none"> ● Recalls procedures with 100 percent accuracy IAW FTI. ● Calls out airspeeds during rendezvous. ● Continuously monitors join-up and advises IP of deviations. ● Directs underrun procedures as necessary.
38. Underrun	
<ul style="list-style-type: none"> ● Recognize/direct underrun as necessary for safety of flight or training. 	<ul style="list-style-type: none"> ● Recognizes the need to underrun. ● Recalls/directs procedures IAW FTI with 100 percent accuracy.
39. Section Approach Procedures	
<ul style="list-style-type: none"> ● Execute an instrument approach as lead or wingman. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maintains instrument parameters and procedures. ▶ Utilizes wingman consideration. ▶ Manages flight configuration, communication, navigation to effectively allow wingman to make a safe touch-and-go or full stop. ● Wingman: <ul style="list-style-type: none"> ▶ Maintains position and configuration as directed by lead. ▶ Enhances pilot's situational awareness during execution of instrument approach procedures.
40. Section Break	
<ul style="list-style-type: none"> ● Conduct VFR recovery and break (3-sec or fan break). 	<ul style="list-style-type: none"> ● Performs/directs recovery and break IAW FTI, Course Rules, FAR/AIM, NATOPS. ● Ensures no rate of descent is generated. ● As wingman, also monitors lead for level break.

BEHAVIOR STATEMENT	STANDARDS
41. Landing Pattern	
<ul style="list-style-type: none"> ● Perform/direct landing pattern procedures and BAW/BAR. ● If from initial, from rolling out on downwind to flare. ● If from takeoff, touch-and-go, or waveoff, commencing the crosswind turn to flare. ● Contacts tower for landing and downwind clearance or broadcasts intentions on CTAF. ● Directs/configures/ trims aircraft for landing. ● Completes the landing checklist. 	<ul style="list-style-type: none"> ● BAR/BAW: <ul style="list-style-type: none"> ▶ Maximum 45° AOB. ▶ TO Flap: <ul style="list-style-type: none"> ▪ 115 +10/-0 KIAS from 180 until final. ▪ 105 +10/-0 KIAS until beginning landing flare. ▶ LDG Flap: <ul style="list-style-type: none"> ▪ 110 +10/-0 KIAS from 180 until final. ▪ 100 +10/-0 KIAS until beginning landing flare. ▶ No-Flap: <ul style="list-style-type: none"> ▪ 120 +10/-0 KIAS from 180 until final. ▪ 110 +10/-0 KIAS until beginning landing flare. ● Tower/CTAF landing communications are initiated at the abeam position IAW FTI format without error. ● Crosswind request/CTAF report made IAW FTI without IP prompting. ● By the abeam position, pattern airspeed +10/-0 KIAS. ● If turning downwind, landing checklist complete prior to the abeam position without error. If out of the break, landing checklist complete prior to landing without error.

TACTICAL FORMATION

BEHAVIOR STATEMENT	STANDARDS
42. SUA/MTR Entry/Exit Procedures	
<ul style="list-style-type: none"> ● Perform entry/exit procedures for SUA or MTR IAW FTI, briefing, and local standards. ● Properly use visual cues and navigational aids to identify the route or SUA entry/exit point. 	<ul style="list-style-type: none"> ● Performs assigned duties during entry and exit from SUA or MTR. ● Contacts airspace control authority and uses appropriate communications to gain clearance to enter/exit controlled airspace. ● For MTR, contacts FSS IAW FTI to enter and exit the route. ● Directs adherence to published or directed entry/exit restrictions with respect to altitude, heading, airspeed, position, squawk, etc. ● Arrives at the entry point ± 4 minutes of briefed time.
43. NAV/Geographic Rendezvous	
<ul style="list-style-type: none"> ● Join up to parade position while lead is orbiting at a navigation fix or over a ground reference point. 	<ul style="list-style-type: none"> ● Recalls procedures with 100 percent accuracy IAW FTI. ● Effectively navigates to the prebriefed rendezvous point. ● Visually acquires the lead aircraft. ● Continuously monitors joinup and advises IP of deviations. ● Directs underrun procedures as necessary.
44. Visual Lookout	
<ul style="list-style-type: none"> ● Keep visual on all formation members. ● Keep visual scan for any traffic/obstacles that are potential conflicts. 	<ul style="list-style-type: none"> ● Maintains visual and/or SA on all members of the formation. ● Understands and appropriately executes lost sight procedures. ● Keeps an active visual scan for any traffic/obstacles that are potential conflicts. ● Uses standard terminology and communication brevity.

BEHAVIOR STATEMENT	STANDARDS
45. Lost Sight Exercise	
<ul style="list-style-type: none"> ● Execute simulated lost sight procedures. 	<ul style="list-style-type: none"> ● Clearly and effectively directs and communicates with IP and other aircraft in the formation, as prescribed in the FTI, in order to establish safe separation.
46. G-warm	
<ul style="list-style-type: none"> ● Execute G-warm maneuver. 	<ul style="list-style-type: none"> ● Directs and/or executes G-warm when applicable and IAW the FTI.
47. Tactical Formation/Maneuvering	
<ul style="list-style-type: none"> ● Discuss/direct proper Tactical Formation positions and maneuvering. 	<ul style="list-style-type: none"> ● Correctly states/directs tactical formation positioning and maneuvering IAW FTI. ● Lead: <ul style="list-style-type: none"> ▶ Maintains area/route orientation. ▶ Clears flight path. ▶ Checks six o'clock position. ● Wingman directs appropriate position/geometry (combat spread, in-place turns, cross turns, etc.) IAW FTI. <ul style="list-style-type: none"> ▶ Ensures deconfliction from Lead. ▶ Checks six o'clock position.

BEHAVIOR STATEMENT	STANDARDS
48. Tail-Chase/Pursuit Curves (pure, lead, lag)	
<ul style="list-style-type: none"> ● Execute tail-chase/pursuit curves profile. ● Display knowledge and performance of pursuit curves. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Displays knowledge and effective use of lead, lag, and pure pursuit. ● Lead: <ul style="list-style-type: none"> ▶ Advises IP of wingman's position and status. ▶ Advises IP of aircraft parameters including airspeed, altitude, Gs, and fuel. ▶ Directs flight to remain within assigned area. ▶ Clears for the section. ▶ Attempts to maintain sight of wingman throughout maneuvering. ● Wingman: <ul style="list-style-type: none"> ▶ Maintains sight of Lead; advises IP when blind. ▶ Advises IP of applicable aircraft parameters including airspeed, altitude, Gs, and fuel. ▶ Makes recommendations to maintain constant relative position off Lead through use of pursuit curves.

SECTION VISUAL NAVIGATION

BEHAVIOR STATEMENT	STANDARDS
49. VNAV Chart	
<ul style="list-style-type: none"> ● Prepare a visual navigation chart. ● Demonstrate chart/route knowledge. 	<ul style="list-style-type: none"> ● Prepares a visual navigation chart via JMPS, IAW the FTI, to an accuracy of ±15 pounds (fuel), ±30 seconds overall and ±20 seconds at each turnpoint (time), and ±2° plotting turnpoint location without error. ● Ensures all CHUM present and correct, chart signed, and all airspace, diverts/conflicting airfields and applicable hazards annotated on chart. ● Briefs to IP: turnpoint description, features inside turnpoint circle, hazards on route, and all altitude changes.
50. Turnpoint Identification	
<ul style="list-style-type: none"> ● Identify turnpoints on a visual route. 	<ul style="list-style-type: none"> ● Identifies visual turnpoints IAW FTI to an accuracy of 80 percent.
51. VNAV Turnpoint Procedures	
<ul style="list-style-type: none"> ● Perform VNAV turnpoint calls. 	<p>Lead/Wing:</p> <ul style="list-style-type: none"> ● Makes 80 percent of VNAV two-minutes-prior, mark-on-top, and wings-level calls using proper format and terminology. ● When wings level after passing each preplanned turnpoint, analyzes fuel and updates ETA to next preplanned turnpoint to an accuracy of 80 percent.

BEHAVIOR STATEMENT	STANDARDS
52. Checkpoint Utilization/Correlation	
<ul style="list-style-type: none"> ● Identify/use visual checkpoints to determine aircraft position. ● Use visually distinct terrain features as aids to navigation. ● Maintain SA and position on flight planned route as required. 	<ul style="list-style-type: none"> ● Identifies intermediate checkpoints to an accuracy of 50 percent. ● Determines geographic position from appropriate visual references to an accuracy of 1 NM. ● Maintains positional awareness during route of flight using clock-chart-ground correlation.
53. Hazard Calls	
<ul style="list-style-type: none"> ● Perform hazard calls IAW FTI. ● Inputs and monitors traffic advisory frequency for hazard airfields. 	<ul style="list-style-type: none"> ● Calls 90 percent of known hazards using proper format and terminology. ● Clears aircraft of weather, birds, obstacles, and other aircraft. ● Inputs traffic advisory frequencies for all hazard airfields along VNAV route. ● Provides timely descriptive or directive hazard calls as situation dictates.
54. Course Analysis/Corrections	
<ul style="list-style-type: none"> ● Determine aircraft position in relation to intended course. ● Perform standard course corrections IAW FTI to correct back to the specified course line. ● Navigate on a specified visual route using dead reckoning/visual cues to correct back to planned course. 	<ul style="list-style-type: none"> ● Remains within 2 NM of route centerline, unless route restrictions dictate otherwise. ● Lead: <ul style="list-style-type: none"> ▶ Timely and accurately applies 80 percent of course corrections IAW FTI. ▶ Directs appropriate heading change to return to course $\pm 2^\circ$ of IP calculations. ● Wing: <ul style="list-style-type: none"> ▶ Maintains route situational awareness and makes appropriate course correction recommendations to Wing IP.

BEHAVIOR STATEMENT	STANDARDS
55. Timing Analysis/Speed Corrections	
<ul style="list-style-type: none"> ● Plan and execute the mission to hit the route entry point at briefed real-world time. ● Plan and execute to arrive at the target at preflight planned TOT. ● Perform standard speed corrections to arrive at the target on time IAW FTI. 	<ul style="list-style-type: none"> ● Gives a time hack during brief. ● Timely and accurately calculates and applies speed corrections IAW FTI. ● Arrives at the target within ±1 minute from preflight real-world time on target. ● Updates ETA to 100 percent accuracy. ● Lead: <ul style="list-style-type: none"> ▶ Timely and accurately applies timing corrections IAW FTI. ▶ Calculates and initiates timing corrections to within <u>+5</u> knots and <u>+6</u> seconds of IP calculations. ● Wing: Maintains timing awareness and makes appropriate correction recommendations to Wing IP.
56. Altitude Selection/Compliance	
<ul style="list-style-type: none"> ● Select the proper altitude to and from visual route. ● Maintain route altitude. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Directs IP to climb/descend as required to maintain VFR hemispheric altitudes. ▶ Directs IP to maintain route altitude. ● Wing: <ul style="list-style-type: none"> ▶ Monitors formation compliance with route altitudes. ▶ Maintains step-up on Lead in combat spread. ▶ Makes recommendations and/or directs lead aircraft when appropriate to correct relevant deviations.

BEHAVIOR STATEMENT	STANDARDS
57. Wind Analysis/Compensation	
<ul style="list-style-type: none"> ● Determine wind direction and magnitude using course trend and time analysis. ● Correctly compensate for current wind condition using course/timing trends and/or ground references/visual cues. 	<ul style="list-style-type: none"> ● Correctly calculates crab and airspeed compensations IAW FTI prior to brief. ● Determines approximate wind direction $\pm 30^\circ$ and ± 10 knots and maintains proper crab angle $\pm 5^\circ$. ● Correctly applies 50 percent of crab and airspeed compensations for headwinds and crosswinds. ● Directs appropriate heading change to return to course $\pm 2^\circ$ of IP calculations.
58. Target Acquisition	
<ul style="list-style-type: none"> ● Acquire and fly to the target. 	<ul style="list-style-type: none"> ● Uses target environment's visual cues to correctly correlate and identify the target. ● Directs the pilot, IAW FTI, to mark on top to an accuracy of $\pm 1/2$ NM.
59. Section Target Attack	
<ul style="list-style-type: none"> ● Perform section target attack IAW FTI, briefing, and local standards. 	<ul style="list-style-type: none"> ● Determines correct parameters for Z-diagram. ● Selects proper action point. ● Directs execution of section target attack procedures and communications IAW FTI.

Chapter X

Master Materials List

1. Individually Issued Materials

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT
a. Flight Training Instructions	CNATRA P-870 CNATRA P-871	1 1
b. T-6A NATOPS Flight Manual	NAVAIR A1-T6A AAA-NFM-100	1
c. T-6A NATOPS Pocket Checklist	NAVAIR 01-T6A AAA-NPCL-100	1
d. NATOPS Instrument Flight Manual		1
e. Flight Crew Checklist		1

2. Aircraft and Major Training Devices

a. T-6A Aircraft.

b. Cockpit Procedures Trainer quantity controlled by Naval Air Warfare Center Training Systems Division (NAVAIRWARCENTRASYS DIV), Training Material Management Division, Inventory Control Branch (Code 5204).

c. Operational Flight Trainer quantity controlled by NAVAIRWARCENTRASYS DIV, Training Material Management Division, Inventory Control Branch (Code 5204). Cost listed in NAVAIRWARCENTRASYS DIV Directory of Naval Training Devices Cognizance Symbol 2"0."

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