NAVAL AIR TRAINING COMMAND

NAS CORPUS CHRISTI, TEXAS
CIN Q-2D-0385, Q-2D-0485

CNATRAINST 1542.162
20 MAR 13

CHIEF OF NAVAL AIR TRAINING

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NAVY

PRIMARY 1 AND 2 UNDERGRADUATE MILITARY FLIGHT OFFICER (UMFO)

2013

DEPARTMENT OF DEFENSE UNITED STATES OF AMERICA

DEPARTMENT OF THE NAVY
CHIEF OF NAVAL AIR TRAINING
250 LEXINGTON BLVD SUITE 102
CORPUS CHRISTI TX 78419-5041

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N712
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CNATRA INSTRUCTION 1542.162

Subj: PRIMARY 1 AND 2 UNDERGRADUATE MILITARY FLIGHT OFFICER (UMFO)

1. Purpose. To publish the curriculum for training Undergraduate Military Flight Officers (UMFOs) in the Primary 1 and 2 phases of Naval Air Training Command (NATRACOM) flight training.

2. Cancellation. CNATRAINST 1542.155C 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.

C HOLLINGSWORTH
Chief of Staff

Distribution:
CNATRA Website

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COURSE DATA

1. Course Title. Primary 1 and 2 Undergraduate Military Flight Officer (UMFO) Training System Curriculum.

2. Course Identification Number (CIN). Primary 1 UMFO, Q-2D-0385; Primary 2 UMFO, Q-2D-0485.

3. Location(s). Naval Air Station (NAS) Pensacola.

4. Course Status. Active.

5. Course Mission. Primary 1 and 2 UMFO 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 Navy Aviation Preflight Indoctrination Training Curriculum, Q-9B-0020.

7. Security Clearance Requirements. None.

8. Follow-on Training. Assigned by the graduate's parent service.

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.

	Training Days	Calendar Weeks
a. Primary 1:	80.0	17.7
b. Primary 2:	15.9	3.5

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. Primary 1 Ground Training

PRIMARY 1 ADMINISTRATION		
Stage	**Symbol**	**Hours**
Welcome Aboard, various briefs, Paraloft, Orientation, Medical Records Check-In, UMFO Brief, and Checkout	G0101-9	14.25
Totals		**14.25**

PRIMARY 1 GROUND TRAINING		
Stage	**Symbol**	**Hours**
Airsickness Management Program	G0201	1.0
T-6A Ejection/Egress Brief and Trainer	G0202	4.0
VFR Communication Procedures	G0301-3	4.5
Crew Resource Management	G0401	2.0
Fleet Operations	G0501-3	5.5
Safety and Policy	G0601-5	5.5
Meteorology	G1001-7	9.5
Meteorology Exam and Remediation/Critique	G1008-9	2.0
Aircraft Systems 1	G1101-14	21.5
Aircraft Systems 1 Exam and Remediation/Critique	G1115-16	2.0
Aircraft Systems 2	G1201-12	14.0
Aircraft Systems 2 Exam and Remediation/ Critique	G1213-14	2.0
Operating Procedures (OPs)/Naval Air Training and Operating Procedures Standardization (NATOPS)	G1301-11 G1313	16.0

PRIMARY 1 GROUND TRAINING (CONT)		
Stage	**Symbol**	**Hours**
EP Test	G1312	1.5
OPs/NATOPS Exam and Remediation/Critique	G1314-15	2.0
Instruments 1	G1401-24	33.0
Instruments 1 Exam and Remediation/Critique	G1425-26	2.5
Instruments 2	G1501-13 G1516-28	42.0
Instruments 2 Exam and Remediation/Critique	G1514-15	3.0
Flight Planning	G1601-39	42.5
Flight Planning Exam	G1640	1.5
Flight Planning Exam Remediation and Critique	G1641	1.5
TP-13 Practical Final Exam	G1642	1.5
Totals		**220.5***

Note: Primary 1 Ground Training totals include 3.0* hours that require a UTD. These hours are also included on the Primary 1 Flight Training table.

b. Primary 1 Flight Support

PRIMARY 1 FLIGHT SUPPORT		
Stage	**Symbol**	**Hours**
Contact Flight Support	C0101-7	14.0
Contact Indoctrination	C1001	3.0
Instrument Navigation Flight Support	I0101-3	13.0
Visual Navigation Flight Support	N0101-10	39.0
Totals		**69.0***

Note: Primary 1 Flight Support totals include 4.5* hours accomplished as self-study in the UTD. These hours are also included on the Primary 1 Flight Training table.

c. Primary 1 Flight Training. The programmed times for each phase, stage, and media are:

PRIMARY 1 FLIGHT TRAINING						
Flight/Events	**UTD/OFT**		**OFT**		**T-6 Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
Cockpit Fam (G11/G12)	2	3.0				
Contact Cockpit Fam Study (SS)	1	1.5*				
Cockpit Procedure Training	3	4.5				
Day Contact					4	6.0
Night Contact					1	1.5
Day Contact Check Ride					1	1.5
INAV Cockpit Fam Study (SS)	1	1.5*				
Instrument Navigation 1	9	13.5			5	10.0
Instrument Navigation 1 Check Ride					1	2.0
VNAV Cockpit Fam Study (SS)	1	1.5*				
Visual Navigation/ Precision Aerobatics			2	3.0	3	6.0
Visual Navigation/ Precision Aerobatics Check Ride					1	2.0
Totals	**17**	**25.5***	**2**	**3.0**	**16**	**29.0**

Note: Totals include 4.5* hours self-study in the UTD without an instructor. Self-study (SS) UTDs will be formally scheduled events.

d. Primary 2 Ground Training

PRIMARY 2 ADMINISTRATION		
Stage	**Symbol**	**Hours**
Primary 2 Checkout	G0110	2.0
Totals		**2.0**

e. Primary 2 Flight Support

PRIMARY 2 FLIGHT SUPPORT		
Stage	**Symbol**	**Hours**
Section Fundamentals Flight Support	F0101-9	15.5
Totals		**15.5***

Note: Primary 2 Flight Support totals include 1.5* hours accomplished as a self-study in the UTD. These hours are also included in the Primary 2 Flight Training table.

f. Primary 2 Flight Training. The programmed times for each phase, stage, and media are:

PRIMARY 2 FLIGHT TRAINING						
Flight/Events	**UTD/OFT**		**OFT**		**T-6 Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
Section Fundamentals Cockpit Fam Study (SS)	1	1.5*				
Instrument Navigation 2	2	3.0			4	8.0
Section Fundamentals			1	1.5	2	3.0
Totals	**3**	**4.5***	**1**	**1.5**	**6**	**11.0**

Note: Totals include 1.5* 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 EVENT			
Training Area	**Brief/ Preflight/ Taxi**	**Taxi/ Debrief**	**Total**
Flight Events: C4001, I4001, N4001, and F4001	2.5	1.5	4.0
Flight Events: All others	2.0	1.5	3.5
Simulator Events: All	0.5	0.5	1.0

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 Instructional Methods. Lecture, Mediated Interactive Lecture (MIL), Computer-Assisted Instruction (CAI), 2B47, Unit Training Device (UTD), Operational Flight Trainers (OFT), aircraft, facility tours, self- and group-paced study, and in-flight instruction.

20. Preceding Curriculum Data. Replaces CNATRAINST 1542.155C.

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 1500.4G, Chapter VII, for further guidance.

ABBREVIATIONS

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

AGL	-	Above Ground Level
AGSM	-	Anti-G Straining Maneuver
AIM	-	Aeronautical Information Manual
AOB	-	Angle of Bank
ASR	-	Airport Surveillance Radar
ATC	-	Air Traffic Control
ATF	-	Aviation Training Form
ATIS	-	Automatic Terminal Information Service
ATJ	-	Aviation Training Jacket
ATS	-	Aviation Training Summary or Approach Turn Stall
AWOS	-	Automated Weather Observing System
BAC	-	Basic Approach Configuration
BAR	-	Basic Airwork Recognition
CA	-	Class Advisor
CAI	-	Computer-Assisted Instruction
CDI	-	Course Deviation Indicator
CFS	-	Canopy Fracturing System
CHUM	-	Chart Updating Manual
CIN	-	Course Identification Number
CNO	-	Chief of Naval Operations
CO	-	Commanding Officer
COMTRAWING SIX	-	Commander Training Air Wing SIX
CRM	-	Crew Resource Management
CTAF	-	Common Traffic Advisory Frequency

CTS	-	Course Training Standard
DA	-	Decision Altitude
DME	-	Distance Measuring Equipment
DOR	-	Drop on Request
DRAFT	-	Destination, Route, Altitude, Fuel, Time
ELP	-	Emergency Landing Pattern
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
FAM	-	Familiarization
FAR	-	Federal Aviation Regulations
FIH	-	Flight Information Handbook
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
GPU	-	Ground Power Unit
H/X	-	Hours per Event
HEFOE	-	Hydraulic, Electrical, Fuel, Oxygen, and Engine
IAF	-	Initial Approach Fix

IAW	-	In Accordance With
ICS	-	Intercommunication System
IFR	-	Instrument Flight Rules
ILS	-	Instrument Landing System
IMS	-	International Military Student
IMSO	-	IMS Officer
IP	-	Instructor Pilot
IPC	-	Initial Progress Check
KIAS	-	Knots Indicated Airspeed
LSC	-	Level Speed Change
MAF	-	Maintenance Action Form
MAP	-	Missed Approach Point
MCF	-	Mission Completion Fuel
MCS	-	Multicrew Simulator
MDA	-	Minimum Descent Altitude
MIF	-	Maneuver Item File
MIL	-	Mediated Interactive Lecture
MOA	-	Military Operating Area
MTR	-	Military Training Route
NAS	-	Naval Air Station
NATOPS	-	Naval Air Training and Operating Procedures Standardization
NAVAID	-	Navigational Aid
NFO	-	Naval Flight Officer
NFS	-	Naval Flight Student
NG	-	No Grade
NIFS	-	NFO Introductory Flight Screening

NM - Nautical Miles

NMU - Number of Marginals and UNSATs

NORDO - No Radio

NOTAMs - Notices to Airmen

NSS - Naval Standard Score

OBOGS - On-Board Oxygen Generating System

OFT - Operational Flight Trainer

OLF - Outlying Field

OLQ - Officer-Like Qualities

OPSO - Operations Officer

PA - Precision Aerobatics

PAR - Precision Approach Radar

PAS - Phase Aggregate Score

PAT - Power, Attitude, Trim

PCL - Pocket Checklist

PEL - Precautionary Emergency Landing

PMSV - Pilot-to-Metro Service

PMU - Power Management Unit

POS - Power Off Stall

PPEL - Practice Precautionary Emergency Landing

PTP - Point-to-Point

RA - Radar Approach

RMU - Radio Management Unit

RRU - Ready Room UNSAT

SA - Situational Awareness

SMS - Student Monitoring Status

SNFO - Student NFO

SOP	- Standard Operating Procedure
SSR	- Special Syllabus Requirement
STAR	- Standard Terminal Arrival Route
SUA	- Special Use Airspace
TAD	- Trim Aid Device
TCN	- Terminal Change Notice
TOT	- Time-On-Target
TP	- Trainer Practical
TPC	- Tactical Pilotage Chart
TRB	- Training Review Board
UHF	- Ultra High Frequency
UMFO	- Undergraduate Military Flight Officer
UNSAT	- Unsatisfactory
UTD	- Unit Training Device
VDP	- Visual Descent Point
VFR	- Visual Flight Rules
VHF	- Very High Frequency
VMC	- Visual Meteorological Conditions
VNAV	- Visual Navigation
VOR	- VHF Omnidirectional Range
XO	- Executive Officer

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GLOSSARY

1. Advancing X. Completed event within the normal syllabus flow. Excludes events with last characters in the range 84-89.

2. Aviation Training Form. A grade sheet documenting student performance for all categories of training regardless of media, phase, or stage.

3. Aviation Training Jacket. The ATJ is the student's training record. It contains ATFs, 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 generating a progress check.

6. Check Ride (SXX90). A flight check in any stage of training.

7. Class Advisor. An instructor pilot (IP) assigned to provide counseling and guidance to a specific class throughout the applicable syllabus.

8. Contact. The stage of training that combines day flight familiarization, aerobatic maneuvers, and out-of-control flight procedures as well as an introduction to the night environment.

9. Course of Training. The entire program of preflight, flight, simulation, academics, and officer development conducted in all media during the programmed training days.

10. Course Training Standard (CTS). A description of required behaviors and standards of performance for a specific maneuver. These standards are in Chapter IX.

11. Courseware. The technical data, FTIs, audio, video, film, CAI, instructor guides, student study guides, and other training material developed to support and implement the syllabus of instruction.

12. 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.

13. Deliverables. A CNATRA 1542/1827 (Rev. 4-04) 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 UMFO training for that student. Deliverables indicate whether the quality and continuity of training provided was IAW CNATRAINST 1542.162.

14. Drop on Request. A student’s voluntary option to request termination of training IAW CNATRAINST 1500.4G.

15. Emergency Procedure. Any degradation of aircraft systems or flight conditions requiring pilot action or intervention.

16. 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.

17. Extra Training (SXX87). Additional student training flights ordered by the OPSO or higher in order to compensate for training deficiencies.

18. 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.

19. Fixed-Wing Operating Procedures Manual. A training wing directive describing standard operating procedures for local fixed-wing aircraft.

20. Flight Training Instruction. A CNATRA-approved manual describing flight procedures and techniques for each training stage.

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

22. 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.

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

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

24. Maneuver Item File (MIF). A listing of required maneuvers and associated proficiency levels for each block of training.

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

26. Off-Wing Flight. A Contact flight not flown with the student's on-wing.

27. On-Wing. The student's assigned instructor in the contact stage IAW CNATRAINST 1500.4G.

28. 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.

29. Phase of Training. A major division in the course of training. The UMFO syllabus consists of Primary (Primary 1 and 2), Intermediate, and Advanced (Strike Fighter and Maritime Command and Control) phases of training.

30. 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.

31. Progress Check Pilot. An instructor pilot authorized to administer Initial or Final Progress Checks.

32. Ready Room UNSAT (RRU). An UNSAT grade given for inadequate knowledge of flight procedures, systems, discuss items, emergency procedures, or deficient preflight planning.

33. Special Syllabus Requirement. One-time, ungraded demonstration item(s).

34. Stage of Training. All training of a particular type (Ground, Contact, Instrument Navigation 1, Visual Navigation/Precision Aerobatics, Instrument Navigation 2, Section Fundamentals) within a phase. The first letter in the lesson designator identifies the stage of each lesson (Example: F5001 is in the Section Fundamentals stage).

35. Standard Operating Procedure. A training wing or squadron directive describing SOPs for local aircraft.

36. Student Monitoring Status. SMS is a squadron-initiated status to address substandard student performance.

37. Training Media. UMFO media include aircraft, UTDs, OFTs, ground training, and CAIs. The second character in the lesson identifier designates the training medium.

38. 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.

39. 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 1500.4G.

40. 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.

41. 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. All students execute Primary 1 events. Students selected for carrier aviation execute Primary 2 events.

f. Syllabus Description. Primary 1 and Primary 2 UMFO are flown in the Primary training platform and divided into stages. Stages are grouped by like flight training regimes such as Contact and Instrument Navigation 1. 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. 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 UMFO system, PAS is not by itself an indication of whether an SNFO has met the criteria necessary for winging or continuation in aviation training. PAS is calculated for each block within a curriculum and for the entire phase.

(2) UMFO 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

SNFO_PAS – SNFO Score
NMU – SNFO NMU
Acad – SNFO Academic Grades
M1 – Squadron Average Score
M2 – Squadron Average NMU
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 for each block within a curriculum and for the entire phase. 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 prior flight time, excluding Introductory Flight Screening (IFS) or IFS equivalent, shall 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 commanding officers 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 1542.162."

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 introduced maneuvers frequently enough to ensure maintaining required proficiency.

c. Hours per Event. 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, the instructor shall annotate reason(s) in the ATF’s general comments section.

d. Special Syllabus Requirements. SSRs are allocated to flights. Unless noted otherwise, instructors may accomplish SSRs on any flight within the block. SSRs shall be completed in the specified block. Completed SSRs shall be annotated in the ATF’s comments section and the TIMS SSR tab. Assign NG/1 as the SSR maneuver grade.

e. Aviation Training Jacket (ATJ) Reviews. Class Advisors will conduct jacket reviews at least monthly. SMS students require weekly ATJ reviews.

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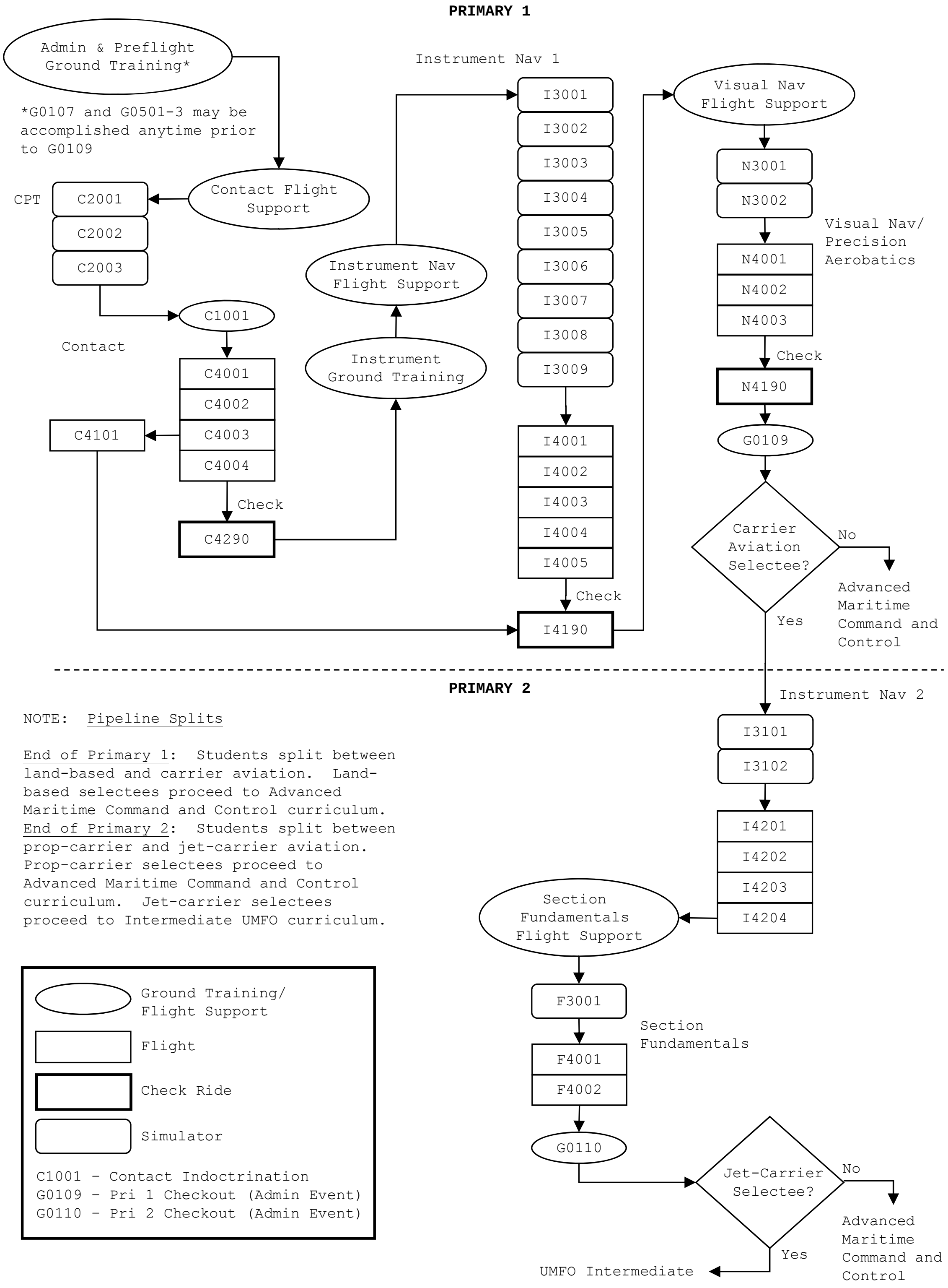
UMFO COURSE FLOW


PRIMARY 1
Admin & Preflight Ground Training*
*G0107 and G0501-3 may be accomplished anytime prior to G0109
Contact Flight Support
CPT
C2001
C2002
C2003
C1001
Contact
C4001
C4002
C4003
C4004
C4101
Check
C4290
Instrument Ground Training
Instrument Nav Flight Support
Instrument Nav 1
I3001
I3002
I3003
I3004
I3005
I3006
I3007
I3008
I3009
I4001
I4002
I4003
I4004
I4005
Check
I4190
Visual Nav Flight Support
N3001
N3002
Visual Nav/ Precision Aerobatics
N4001
N4002
N4003
Check
N4190
G0109
Carrier Aviation Selectee?
No
Advanced Maritime Command and Control
Yes
PRIMARY 2
Instrument Nav 2
I3101
I3102
I4201
I4202
I4203
I4204
Section Fundamentals Flight Support
F3001
Section Fundamentals
F4001
F4002
G0110
Jet-Carrier Selectee?
No
Advanced Maritime Command and Control
Yes
UMFO Intermediate
Ground Training/ Flight Support
Flight
Check Ride
Simulator
C1001 - Contact Indoctrination
G0109 - Pri 1 Checkout (Admin Event)
G0110 - Pri 2 Checkout (Admin Event)

NOTE: Pipeline Splits

End of Primary 1: Students split between land-based and carrier aviation. Land-based selectees proceed to Advanced Maritime Command and Control curriculum.
End of Primary 2: Students split between prop-carrier and jet-carrier aviation. Prop-carrier selectees proceed to Advanced Maritime Command and Control curriculum. Jet-carrier selectees proceed to Intermediate UMFO curriculum.

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

a. Flight/Simulator

(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 MIF, or until the second consecutive UNSAT or third cumulative UNSAT in the block.

(3) An UNSAT check ride (SXX90), two consecutive UNSATs, or three cumulative UNSATs (in the same block) result in an IPC. Document the failed check ride or second consecutive/third (in block) cumulative UNSAT on a pink ATF for that syllabus event.

(4) A subsequent check ride failure, two further consecutive UNSATs, or three more cumulative UNSATs (in block) result in an FPC. Document the failed check ride, second consecutive/third (in block) cumulative UNSAT on a pink ATF generating the progress check.

(5) Failing an FPC results in a TRB.

b. Ready Room UNSAT (RRU)

(1) An initial RRU on any syllabus event(s) will result in an IPC. Document the RRU on a pink ATF for that event. The event will be marked as incomplete with an UNSAT grade for General Knowledge/Procedures. On remediation of UNSAT performance, the event will be flown to completion, and general knowledge and emergency procedures will be incorporated into the overall grading solution.

(2) A second or subsequent RRU, failed IPC, or triggering UNSAT flight event will result in an FPC. Document the failed IPC on a pink ATF generating the Progress Check.

(3) Failing an FPC will result in a TRB.

c. Academic. Failing two exams triggers an IPC. Failing a subsequent exam triggers an FPC.

d. Remediation

(1) A dual simulator or ground evaluation emphasizing the deficient areas may clear an UNSAT check ride or end of block syllabus event caused solely by ground operations.

(2) EOB UNSAT syllabus events in the instrument stage may be cleared in the simulator if these conditions are met:

(a) The cause of the UNSAT is specific to the maneuver.

(b) The simulator is suited to the failed maneuver.

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 missions provided the UNSAT mission was not a prerequisite.

4. Training Review Board

a. Scope. Consider the circumstances relevant to the student’s training, for example:

(1) Quality of training provided in accordance with applicable FTI.

(2) Continuity of training provided.

(3) Outside influences/extenuating circumstances.

(4) The TRB ***shall not*** make attrition/retention recommendations based on perceived student potential or aspects unrelated to the administrative application of training IAW this directive.

b. Composition

(1) Voting Members. The board consists of three voting members, one of which is the Senior Member. The TRAWING Commodore designates the Senior Member in writing.

(2) Other Members/Observers. At least one member will be from the student's parent service. For an IMS, where possible, include the country liaison officer and the TRAWING IMSO as observers.

(3) Academic Failures. TRBs convened due to academic failures may include one qualified civilian instructor as a voting member.

(4) Exclusion. The following persons are prohibited from serving as a voting member on a student's TRB:

(a) The student's on-wing.

(b) Any instructor who has sat on a previous TRB for the student.

(c) Any instructor who has awarded an UNSAT to the student in the relevant training stage.

(d) The squadron IMSO, in the case of an international student.

c. Deliverables

(1) A report assessing the student's training quality, highlighting any deficiencies of training received. If it was determined that there was a deficiency in training, the board shall recommend remediation of the student for subsequent return to training.

(2) CNATRA 1542/1827 (Rev. 4-04), TRB Summary form, shall be used to document the proceedings.

5. Instructor Continuity

a. Students shall fly Contact syllabus events C4001-C4003 with their on-wing. Exceptions:

(1) The CO, XO, or a member of the operations department may substitute as on-wing in the event the student's on-wing is not available and an on-wing change is not prudent.

(2) Substitute on-wings shall be in the student's direct chain of command.

b. There are no other continuity requirements unless specified by the operations department for SMS students.

6. Break in Training Warmup Events (SXX86). 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 and coded as an SXX86 (e.g., I4286). Warmup grades do not satisfy block or MIF requirements and shall not be included in the cumulative totals. Warmup criteria do not apply to Night Contact (C4101).

a. Warmups Between Stages. Warmup events shall not be given prior to the first flight in a stage unless 30 days have elapsed since any syllabus flight or simulator event.

b. Warmup Event Criteria. Optional warmup events are based on the student's performance. If the student's performance meets MIF, the event shall count as the next syllabus event. If a student's performance is Marginal or UNSAT, the flight is a warmup.

c. Additional Warmup Events. The squadron CO may direct additional warmup aircraft or simulator events for extended breaks in training.

CRITERIA FOR AWARDING WARMUP EVENTS IN A STAGE OR BLOCK		
Break* (Days)	**Warmup Events**	**Remarks**
7-13 Sim to A/C	1 Mandatory Simulator	● Mandatory warmup is not an advancing "X."
7-13 All others	1 Optional	● Based on performance. ● Required if overall event grade is Marginal or UNSAT. ● Prohibited if: ▶ Performance meets MIF/standard. ▶ Break occurs between stages (see paragraph 6a).
14-30 Sim to A/C	2 Mandatory Simulators	● Mandatory warmups are not advancing "X's."
14-30 All others	1 Mandatory 1 Optional	● Mandatory warmup is not an advancing "X." ● Optional warmup based on performance. ● Required if overall event grade is Marginal or UNSAT.

*Break = (Current Julian Date) – (Julian Date of last event, regardless of stage).

7. Additional Flights/Simulators

a. Extra Training (ET) Events (SXX87). All ETs shall be dual and coded as SXX87 (e.g., C4187).

(1) ET events include, but are not limited to:

(a) IPC/FPC ET Events. Normally, award these events to compensate for training inadequacies, e.g., poor event/ maneuver continuity or improper instruction.

1. Preceding an IPC. The OPSO may authorize one ET prior to an IPC.

2. Preceding an FPC. The CO may authorize as many as two ETs prior to an FPC.

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

4. Document the awarding of IPC/FPC 87 events on supplemental ATFs.

(2) If the ET does not meet the objectives, the OPSO or above decides if an additional event is warranted.

b. Adaptation Events (SXX84). The OPSO may grant events required for adaptation to the flying environment when requested by the flight surgeon, e.g., airsickness, eyeglasses, etc.

8. Student Monitoring Status (SMS)

a. Any student who is designated Marginal shall be placed on SMS. The objective of SMS is to focus supervisory attention to a student’s progress in training, specific deficiencies, and potential to complete the program. It may also be applied to students who require supervisory attention while trying to resolve personal issues.

b. The Operations Department will place the student on SMS to address substandard performance in a specific area.

c. SMS is intended as a short-term program. SMS requires the setting of specific goals. SMS should include, but is not limited to, training tailored to correct deficiencies as determined by the Operations Officer or to address personal issues as determined by the Class Advisor. The goals and the required period in SMS must be annotated in a supplemental ATF in the student’s ATJ.

d. A student who receives two UNSATs in a block of training, or three UNSATs within a single stage of training shall be considered Marginal and placed on SMS.

e. If the student achieves the goals within the SMS period, or when personal issues are resolved, the student returns to normal training flow. If the student is unable to meet the specific goals of SMS or performance does not improve, the student shall progress to an FPC.

9. Ground Training and Briefing Requirements

a. Mission Preparation, Briefings, and Debriefings

(1) EOB Events. The IP shall carefully review the ATS 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 with:

(a) A thorough knowledge of:

1. The flight's Discuss Items, as listed in Chapters II and IV-VII.

2. Procedural knowledge of the critical 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.

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

(3) Briefing. Thoroughly cover the mission's:

(a) Event Discuss Items, as listed in Chapters II and IV-VII.

(b) Specific objectives.

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

(d) Planned profile and contingencies.

(4) Debriefing

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

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

b. Emergency Procedures (EP) Briefing and Training

(1) EP training builds the student's confidence in the aircraft. The IP 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 simulator events when practical; however, instructional block objectives take precedence.

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

10. Mission Grading Procedures and Evaluation Policies

a. General Grading and Evaluation Policy. MIFs listed are minimum stage/phase completion standards per maneuver. Students who consistently perform at the absolute minimum standard through multiple stages/phases may not possess the skills required to complete follow-on training. A MIF is designed to allow for minimum performance in a specific area with the understanding that performance 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 ATF comments.

(a) Demonstrated (NG/1 Level). Enter NG:

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

2. To indicate accomplishing SSRs. Specify the completed SSRs in the ATF's SSR comments section and the TIMS SSR tab.

(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 unsatisfactory 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 EOB is questionable. IPs may not award a Marginal on an EOB event or check ride.

(c) UNSAT. Student exhibits dangerous tendencies, or progress toward meeting EOB standards is insufficient.

(3) Awarding Overall Event Grades. The student's overall grade is based on his or her 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.

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

1. N30 MIF requires an F/3 for Mission Planning. N40 MIF requires a G/4.

2. The student must meet or exceed F/3 to progress out of N30.

3. The student must maintain or exceed F/3 until the last N40 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 a stage or between media within a stage. The exception is when MIF on a subsequent block is below the preceding block MIF. In these cases, the lower MIF applies.

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

1. The student is allowed up to two maneuver grades of F/3 where a G/4 is required on previous block MIF, and:

a. The student has previously demonstrated G/4 proficiency when a G/4 was required on previous block MIF,

b. The maneuver was not a check ride critical (+) item,

c. The IP is satisfied the student is ready to progress to the next event.

2. The IP shall award an overall UNSAT due to regression rules if:

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

b. 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

c. There is regression on more than two items during one event.

(4) Maneuver Requirements. For each block:

(a) Mandatory Items. Items with a number and a plus (+) are mandatory and the student must meet the required proficiency by EOB.

(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.

(c) Not Demonstrated/Not Performed. The IP 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 IP proficiency.

(5) Incomplete Events. In general, IPs should consider an event complete if able to accomplish either all high or all low work. This rule is particularly true when weather precludes one or the other, and the IP 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 incompleted solely to provide unwarranted extra training.

(a) Assessment. Assess the event complete if:

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

2. Sufficient events remain in the block to redress the imbalance, and

3. Individual maneuvers can still be accomplished within the block.

4. 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 PAS, except where the grade assigned for the repeated item is lower than the lowest grade previously assigned on that item across all previous attempts at that event.

(c) Simulator Event Completion. Assess a simulator event complete if the student has received a full 1.5-hour training period.

c. Policies for Evaluation Flights and Ground Evaluations

(1) Authorized Evaluators. The squadron CO will designate check pilots for each stage.

(2) Check Rides (SXX90)

(a) Single-Event Training Blocks. Check rides amount to single-event training blocks; therefore, all rules regarding progressing out of a block apply, except as noted below.

1. 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 entire event should be devoted to assessing the student's ability and readiness to progress to the next stage of training. All maneuvers indicated with a plus (+) are check ride critical and must be accomplished to MIF. ***Regression rules do not apply.***

4. The student should be able to demonstrate required levels of proficiency without instructor assistance; however, instruction is allowed on check rides and students may reaccomplish maneuvers at the check pilot's discretion.

(b) Incomplete Check Ride. The check ride shall be incomplete when:

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

2. The check pilot was unable to sample sufficient examples of a given maneuver to assess the student's overall performance.

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

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

a. Any critical (+) item is below MIF, or

b. More than two optional items were graded F/3 where G/4 is required, or

c. Any maneuver is U/2.

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

(3) Progress Check Procedures

(a) The Progress Check Pilot shall consider the student's proficiency, judgment, air sense, and overall ability to maneuver the aircraft safely and confidently. The student must also demonstrate the potential to successfully complete Primary, Intermediate, and Advanced training. All progress checks must meet MIF for the most recently completed block of training. Progress checks shall be full mission profiles emphasizing the student's weak areas and a representative cross section of area and pattern maneuvers. All critical items do not need to be accomplished. Document failed progress checks on a pink-colored version of the respective ATF for the failed event generating the progress check. Flight UNSATs and RRUs proceed in separate, parallel tracks.

1. The student's first flight progress check is an IPC (SXX88) event. Any subsequent flight progress check is an FPC (SXX89).

2. Similarly, the first RRU generates an IPC. A subsequent RRU generates an FPC.

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

1. Criteria for an IPC are:

a. Failed check ride.

b. Two consecutive UNSAT events in the same stage or three in-block, not including XX87 events.

c. Following an RRU.

d. Following two academic test failures in phase.

e. OPSO or above may direct an IPC when the student's potential to complete the syllabus is in doubt.

2. Outcomes are:

a. Passing returns the student to normal syllabus flow.

b. Failing results in an FPC.

3. IPC IPs. The OPSO or his representative designated by CO in writing, usually a designated Standardization pilot, shall administer the IPC. Neither the student's on-wing nor the IP that generated the UNSAT grade resulting in the IPC shall administer the IPC. A qualified IPC IP shall monitor an IPC conducted in a simulator. The squadron IPC IP is required to make a "return to training" or "continue the attrition process" recommendation to the squadron CO.

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

1. Criteria for an FPC are:

a. Following a failed IPC.

b. If the conditions requiring an IPC exist, and the student has already accomplished an IPC in phase.

c. Following the third or subsequent academic test failure.

d. CO directs FPC when the student's potential to complete the syllabus is in doubt.

2. Outcomes are:

a. Passing returns the student to normal syllabus flow.

b. Failing results in a TRB.

3. FPC IPs. The CO, XO, or a CO-designated representative administers the FPC. It is the intent of CNATRA that wherever possible the CO, or in his absence, the XO, conducts FPCs. In the event that neither the CO nor XO are qualified or available to instruct in the required stage, the CO may designate a senior officer (O-4 or above) to conduct the FPC by direction. Neither the student's on-wing nor the IP that generated the UNSAT grade resulting in the FPC shall administer the FPC. A qualified FPC IP shall monitor an FPC conducted in the simulator. The FPC IP is responsible for a return to training decision or an attrition recommendation to the COMTRAWING.

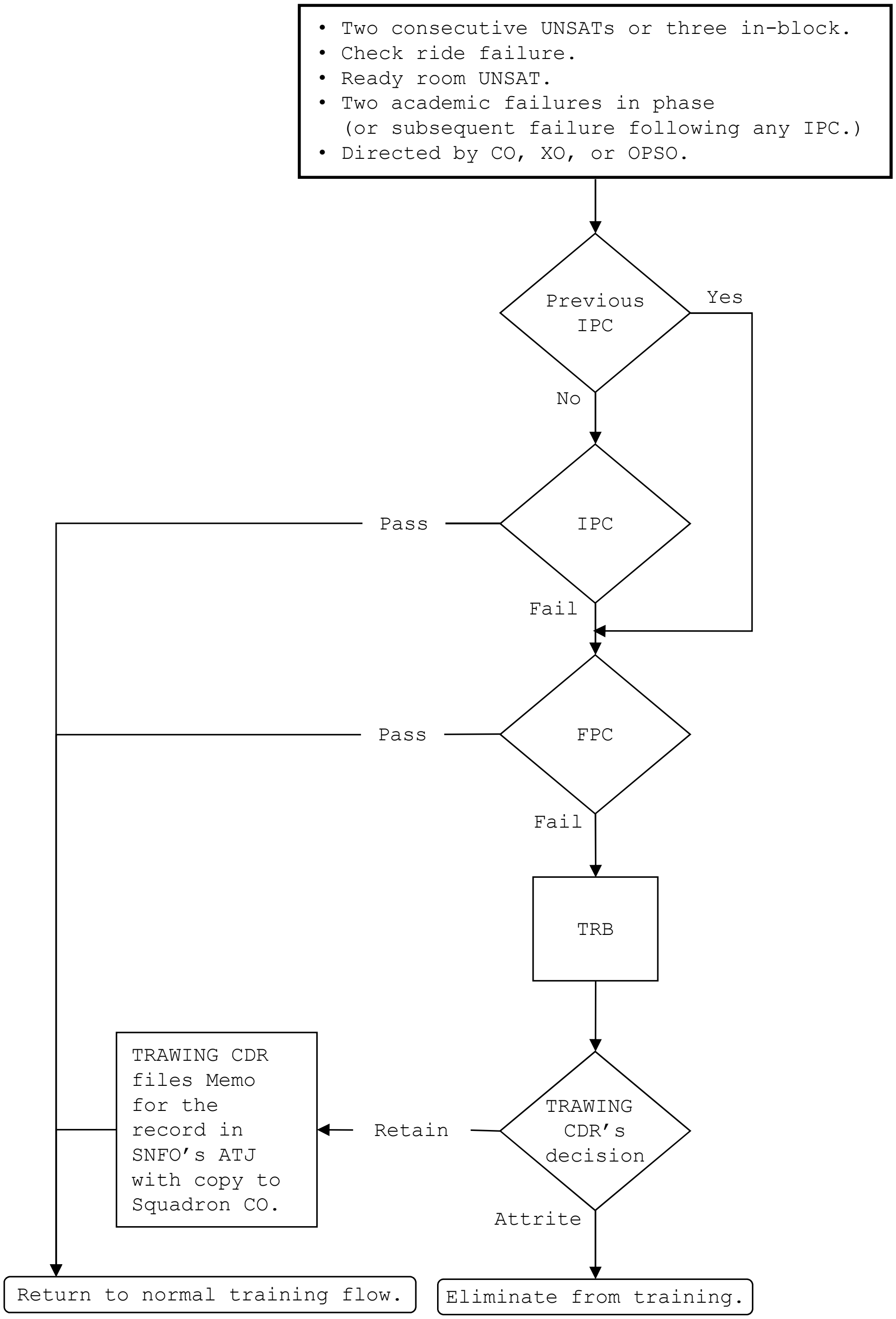
d. Progress Check Counseling

(1) Prior to an IPC. The operations department shall counsel the student on the Progress Check Training Review Process and document counseling on a supplemental ATF.

(2) Upon Completion of an IPC. The IPC IP or OPSO shall counsel the student on the Progress Check Training Review Process. When conducted by the IPC IP, document counseling on the IPC ATF. When conducted by the OPSO (and the OPSO was not the IPC IP), document counseling on a supplemental ATF.

(3) Upon Satisfactory Completion of an FPC. The CO or his designated representative will counsel the student. Counseling should consist of the Progress Check Training Review Process, attrition/retention recommendations, and future courses of action. The CO shall document counseling on the FPC ATF. If conducted by a designated representative, document counseling on a supplemental ATF.

UMFO PROGRESS CHECK TRAINING REVIEW PROCESS


• Two consecutive UNSATs or three in-block.
• Check ride failure.
• Ready room UNSAT.
• Two academic failures in phase (or subsequent failure following any IPC.)
• Directed by CO, XO, or OPSO.
Previous IPC
Yes
No
IPC
Pass
Fail
FPC
Pass
Fail
TRB
TRAWING CDR's decision
Retain
Attrite
TRAWING CDR files Memo for the record in SNFO's ATJ with copy to Squadron CO.
Return to normal training flow.
Eliminate from training.

11. Special Instructions and Restrictions

a. Flight Hour/Event Requirements and Restrictions

(1) Programmed Hours and Events. Programmed syllabus flight hours are 40.0 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 or 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 a dual event and the brief for a follow-on dual event or simulator 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 instructional event of the following day.

b. Maneuver Demonstrations. The student shall not perform a maneuver for the first time until the IP demonstrates the maneuver, unless previous training adequately fulfills this role. This requirement does not apply to simulator events.

c. Airspace Utilization. Conduct contact and section events in designated areas. These events may be out-and-ins with OPSO approval.

d. Aircraft/Simulator Interchangeability. Simulator events may be substituted in the T-6A when the UTD/OFT is unavailable for extended periods of time.

Chapter II

Ground Training

1. Use of Preflight Training Time. Hours are available during the Preflight Stage to schedule briefings, aircraft exterior and interior inspections, learning center programs, study sessions, or any other activities that will enhance the student's training and preparation for Primary 1. If considered more beneficial, these hours may be used for academic training normally conducted early in Primary 1; however, all prerequisites must be met.

Blk #	Media	Title	Events	Hrs	Blk Name
G01	Class	Administration	10	16.25	ADMIN

1. Prerequisites

a. G0101 prior to G0103-8 (any order).

b. G0107, G0501-3, and N4190 prior to G0109 (Primary 1).

c. F4002 prior to G0110 (Primary 2).

2. Events

G0101	MIL	Academic Welcome Aboard	0.75
G0102	MIL	Academic Procedures Brief	0.50
G0103	Lect	Commodore's Brief	1.00
G0104	None	Paraloft	2.00
G0105	None	VT-10 Orientation	3.50
G0106	None	Medical Records Check-In	1.50
G0107	Lect	Chaplain's/Ethics Brief	1.00
G0108	MIL	UMFO Brief	2.00
G0109	None	Primary 1 Checkout	2.00
G0110	None	Primary 2 Checkout	2.00

3. Syllabus Notes

a. After Primary 1 Checkout, E-6, EP-3, P-3, and P-8 Student Selections proceed to Advanced Maritime Command and Control. Remaining students proceed to Primary 2.

b. After Primary 2 Checkout, E-2 Student Selections proceed to Advanced Maritime Command and Control. Remaining students proceed to Intermediate UMFO.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G02-4	Class	Preflight Ground Training	6	11.5	See Below

1. Prerequisites

a. G1312 (EP Boldface Procedures Test) prior to G0201-2 (any order).

b. G1315 (Operating Procedures and NATOPS Exam Remediation/Critique) prior to G0301-3 (in order) and G0401.

2. Events

G0201	Lect	Airsickness Management Program	1.0	AEROMED
G0202	Lect	T-6A Ejection/Egress Brief and Trainer	4.0	AEROMED
G0301	CAI	T-6A Introduction to Communications	1.0	VFRCOMM
G0302	Twr Lect	Comm Tower Visit	1.5	VFRCOMM
G0303	CAI	T-6A VFR Communications	2.0	VFRCOMM
G0401	MIL	T-6A Crew Resource Management	2.0	CRM

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G05	Class	Preflight Ground Training – Fleet Operations	3	5.5	FLTOPS

1. Prerequisite. G0102 (Academic Procedures Brief) prior to G0501-3 (any order).

2. Events

G0501	MIL	Fleet Operations and Missions	1.0
G0502	MIL	Introduction to Fleet Command and Control, Operations, and Planning	0.5
G0503	MIL	Fleet Aircraft and Weapons	4.0

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G06	Class	Preflight Ground Training – Safety and Policy	5	5.5	SAFPOL

1. Prerequisites

a. G0102 (Academic Procedures Brief) prior to G0601-2 (any order) and G0604-5 (any order).

b. G0601-2 prior to G0603.

2. Events

G0601	MIL	Introduction to Safety	1.0
G0602	MIL	Ground Safety ORM	1.0
G0603	Lect	Aviation Safety Program	1.5
G0604	MIL	Navy Flight Policy	1.0
G0605	MIL	Flight Regulations and Policy	1.0

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G10	Class	Preflight Ground Training – Meteorology	9	11.5	METRO

1. Prerequisite. G0102 (Academic Procedures Brief).

2. Events

G1001	MIL	Introduction to Metro	1.0
G1002	CAI	METARs, PIREPs, and TAFs	1.0
G1003	CAI	Weather Charts	1.5
G1004	CAI	Weather Forecasts and Advisories	1.5
G1005	CAI	DD-175-1	1.5
G1006	MIL	Application of Weather Data	1.0
G1007	MIL	Metro Test Review	2.0
G1008	Test	Metro Exam	1.5
G1009	Lect	Metro Exam Remediation/ Critique	0.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G11	Class	Preflight Ground Training – Systems 1	16	23.5	SYS1

1. Prerequisites

a. G0102 (Academic Procedures Brief) prior to G1101-2 (in order).

b. G1102 prior to G1103-4 (any order), G1107-8 (any order), and G1111-13 (any order).

c. G1104 prior to G1105.

d. G1103 and G1105 prior to G1106.

e. G1108 prior to G1109-10 (in order).

f. G1111-13 prior to G1114.

g. G1106, G1110, and G1114 prior to G1115-16 (in order).

2. Events

G1101	MIL	Introduction to T-6 Systems	1.0
G1102	T-6A	T-6A Aircraft Systems Tour	2.0
G1103	CAI	Flight Controls	1.0
G1104	CAI	Hydraulic Systems 1	1.5
G1105	CAI	Hydraulic Systems 2	1.5
G1106	MIL	Flight Controls and Hydraulics Review	2.0
G1107	Lect/ UTD	T-6A Cockpit Familiarization 1	2.0
G1108	CAI	Flight Instruments 1	1.5
G1109	CAI	Flight Instruments 2	1.0

2. Events (cont)

G1110	MIL	Flight Instruments Review	1.5
G1111	CAI	Communication Systems	2.0
G1112	CAI	Navigation Systems	1.5
G1113	CAI	GPS	1.0
G1114	MIL	Communications and Navigation Systems Review	2.0
G1115	Test	Systems 1 Exam	1.5
G1116	Lect	Systems 1 Exam Remediation/Critique	0.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G12	Class	Preflight Ground Training - Systems 2	14	16.0	SYS2

1. Prerequisites

a. G1102 (Introduction to T-6 Systems) prior to G1201-2 (any order), G1204, G1207, G1209, and G1210.

b. G1201-2 prior to G1203.

c. G1204 prior to G1205-6 (in order).

d. G1207 prior to G1208; G1208-10 prior to G1212.

e. G1107 (T-6A Cockpit Familiarization 1) prior to G1211.

f. G1116 (Systems 1 Exam Remediation/Critique), G1203, G1206, and G1212 prior to G1213-14 (in order).

2. Events

G1201	CAI	Electrical System	1.0
G1202	CAI	Fuel System	1.0
G1203	MIL	Electrical and Fuel Review	1.5
G1204	CAI	Propulsion 1	2.0
G1205	CAI	Propulsion 2	1.0
G1206	MIL	Propulsion Review	1.0
G1207	CAI	Environmental System 1	1.0
G1208	CAI	Environmental System 2	0.5
G1209	CAI	Canopy System	0.5
G1210	CAI	Ejection System	1.0
G1211	UTD	T-6A Cockpit Familiarization 2	1.5

2. Events (cont)

G1212	MIL	Environmental, Canopy, and Ejection Review	2.0
G1213	Test	Systems 2 Exam	1.5
G1214	Lect	Systems 2 Exam Remediation/Critique	0.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G13	Class	Preflight Ground Training – Operating Procedures	15	19.5	OPPROC

1. Prerequisites

a. G1214 (Systems 2 Exam Remediation/Critique) prior to G1301; G1301 prior to G1302-11 (any order).

b. G1302-11 prior to G1312-13 (any order); G1312-13 prior to G1314-15 (in order).

2. Events

G1301	MIL	Introduction to Operation Procedures and NATOPS	1.0
G1302	CAI	Exterior Inspection	1.0
G1303	CAI	Preflight Checks	1.5
G1304	CAI	In-Flight Checks	0.5
G1305	CAI	Postflight Checks	0.5
G1306	CAI	Aircraft Operating Limitations	0.5
G1307	MIL	Handling Emergency Procedures	1.0
G1308	MIL	Takeoff Emergencies	1.0
G1309	MIL	In-Flight Emergencies 1	2.5
G1310	MIL	In-Flight Emergencies 2	2.5
G1311	MIL	In-Flight Emergencies 3	3.0
G1312	P/P	EP Boldface Procedures Test	1.5
G1313	Lect	Operating Procedures (OPs) and NATOPS Review	1.0
G1314	P/P Exam	OPs and NATOPS Exam	1.5
G1315	Lect	OPs and NATOPS Exam Remediation/Critique	0.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
C01	Class	Contact Flight Support	7	14.0	CONFP

1. Prerequisites

a. G1315 (OPs and NATOPS Exam Remediation/ Critique) prior to C0101-5 in order.

b. G1312 prior to C0106.

c. C0105 prior to C0107.

2. Events

C0101	MIL	T-6A Contact 1 - Flight Line Preparation	1.0
C0102	MIL	T-6A Contact 2 - Ground Procedures	2.0
C0103	MIL	T-6A Contact 3 - Course Rules/Area 1/Military Operating Area (MOA)	2.0
C0104	MIL	T-6A Contact 4 – Flight Procedures/Night Flight	1.5
C0105	MIL	T-6A Contact 5 – Landing Pattern/EPs	2.0
C0106	SS/UTD	Contact Cockpit Familiarization Study	1.5
C0107	SS	Contact Event Rehearsal Study	4.0

3. Syllabus Note. C0106 should be accomplished in the UTD without an instructor (formally scheduled event).

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
C10	Class	Contact Indoctrination (FAM-0)	1	3.0	CONTACT

1. Prerequisite. C2003.

2. Events

C1001	Lect	Contact Indoctrination (FAM-0)	3.0

3. Syllabus Notes. The student will accomplish or simulate the following items during C1001.

a. Canopy operation (exterior/interior), before exterior/ interior inspections, complete strap-in (all gear), all ground checklists, cockpit familiarization (identify all electronic displays and their function), RMU/backup UHF control head operation, safety pins stowage, emergency ground egress (with and without CFS), and ejection.

b. All students are required to successfully accomplish a boldface and OPS limit exam. Successful accomplishment of the boldface and OPS limit exam consists of 100 percent accuracy. Only minimal abbreviation will be acceptable. Less than 100 percent on the boldface and OPS limit exam shall be annotated on the grade sheet.

4. Discuss Items. Flight line expectations, scheduling/ snivels, chain of command, class advisor program, ATF, ATJ, what-to-bring to brief, conduct of preflight briefings, discuss items, weather briefs, weight and balance, flight gear check, aircraft issue, MAF, ground safety, special syllabus requirements, procedures, emergency procedures, information resources, hangar/chair flying, DOR, TTO policy. General discussion of all planned items in paragraph 3 above.

Blk #	Media	Title	Events	Hrs	Blk Name
G14	Class	Instrument Ground Training – Instruments 1	26	35.5	INST1

1. Prerequisites

a. C4290 prior to G1401-4 (any order) and G1406.

b. G1402-4 prior to G1405; G1405 prior to G1408 and G1411.

c. G1406 prior to G1407.

d. G1408 prior to G1409-10 (in order); G1410 prior to G1412.

e. G1412 prior to G1413-23 (in order).

f. G1401, G1407, G1411, and G1423 prior to G1424-26 (in order).

2. Events

G1401	MIL	Introduction and Basic Instruments Overview	1.0
G1402	CAI	Instrument Displays and Cross-check	1.0
G1403	CAI	Introduction to Radio Instruments	2.0
G1404	CAI	FLIP, NOTAMs, and Charts	2.0
G1405	MIL	Basic Instrument Review	3.0
G1406	MIL	Intro to 2B47/TP-1 Brief	0.5
G1407	RIOT	RIOT 1 (Direct, Radial Tracking, Course Intercept)	2.0
G1408	Lect	CR-2, Wind Analysis, and Time Gates	1.5
G1409	Lect/ 2B47	TP-1 Fly (Direct, Radial Tracking, Course Intercept)	2.0

2. Events (cont)

G1410	Lect	TP-1 Debrief/FLIP Homework	0.5
G1411	MIL	Advanced Instruments Overview	0.5
G1412	CAI	Instrument Takeoff and Departures	1.0
G1413	CAI	Arrival Preparation and Holding	0.5
G1414	MIL	Instruments Review 1	2.0
G1415	MIL	Holding Lecture (6Ts)/ Holding Trainer	1.5
G1416	RIOT	RIOT 2 (Direct, Point-to-Point, Arc)	1.5
G1417	Lect/ 2B47	TP-2 Fly (Direct, Point-to-Point, Course Intercept, Arc)	1.5
G1418	Lect	TP-2 Debrief	0.5
G1419	Lect	FLIP Review and CR-2 Exercises	1.5
G1420	RIOT	RIOT 3 (Wind Analysis, GS, ETAs, Holding)	2.0
G1421	Lect	TP-3 Brief	0.5
G1422	Lect/ 2B47	TP-3 Fly (Holding)	2.0
G1423	Lect	TP-3 Debrief/Homework	1.0
G1424	Lect	Instruments 1 Exam Review	1.5
G1425	Test	Instruments 1 Exam	1.5
G1426	Lect	Instruments 1 Exam Remediation/Critique	1.0

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G15	Class	Instrument Ground Training – Instruments 2	28	45.0	INST2

1. Prerequisites

a. G1426 prior to G1501-2 (any order); G1501-2 prior to G1503.

b. G1503 prior to G1504-5 (any order); G1504-5 prior to G1506.

c. G1506 prior to G1507-10 (in order); G1510 prior to G1511-12 (any order).

d. G1511 prior to G1513-15 (in order); G1512 and G1515 prior to G1516.

e. G1516 prior to G1517-25 (in order).

f. G1525 prior to G1526-27 (any order).

g. G1527 prior to G1528.

2. Events

G1501	CAI	Descent and Penetration	0.5
G1502	CAI	Low Altitude Approaches	1.0
G1503	MIL	Instruments Review 2	2.5
G1504	CAI	Final Approach	1.0
G1505	CAI	Radar Approaches	1.5
G1506	CAI	Transition to Landing and Missed Approach	2.5
G1507	MIL	Instruments Review 3	3.0
G1508	Lect	Homework - INAV FTI and Comms	1.5
G1509	MIL	Instruments Review 4	2.5
G1510	Lect	Comm Brief and Radar Pattern	1.0

2. Events (cont)

G1511	Twr Lect	Tower, GCA Visit	2.0
G1512	Lect	TP-4 Brief/RIOT Examples	1.5
G1513	MIL	Instruments 2 Exam Review	1.5
G1514	Test	Instruments 2 Exam	1.5
G1515	Lect	Instruments 2 Exam Remediation/Critique	1.5
G1516	Lect/ 2B47	TP-4 Fly (Departure Procedures, Point-to-Point, Procedure Turn Approach)	2.0
G1517	Lect	TP-4 Debrief	1.0
G1518	Lect	TP-5 Brief/TP-6 Brief	1.5
G1519	Lect/ 2B47	TP-5 Fly (Departure Procedures, Radial Tracking, Arcing Approach, Holding)	2.0
G1520	Lect	TP-5 Debrief	1.5
G1521	Lect/ 2B47	TP-6 Fly (Departure Procedures, Radial Tracking, Point-to-Point, Procedures Turn Approach, Holding)	2.5
G1522	Lect	TP-6 Debrief	1.0
G1523	Lect	TP-7 Brief	1.0
G1524	Lect/ 2B47	TP-7 Fly Practical Final	2.5
G1525	Lect	TP-7 Debrief/Course Critique	1.0
G1526	Lect	INAV Procedures/FTI Brief	1.5
G1527	Lect/ 2B47	TP-7 Remedial Fly	2.0
G1528	Lect	TP-7 Remedial Debrief/FLIP Homework	0.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
G16	Class	Instrument Ground Training – Flight Planning	42	47.0	FLTPLNG

1. Prerequisites

a. G1526 (INAV Procedures/FTI Brief) and G1528 (TP-7 Remedial Debrief/FLIP Homework) prior to G1601-3 (any order) and G1605-6 (any order).

b. G1601 and G1603-6 prior to G1607 and G1613; G1602 prior to G1604.

c. G1607 prior to G1608-11 (in order).

d. G1606 prior to G1612; G1611-12 prior to G1614.

e. G1614 prior to G1615-18 (in order); G1618 prior to G1620-24 (in order).

f. G1612-13 prior to G1619; G1619 prior to G1625.

g. G1624 prior to G1626-30 (in order); G1630 prior to G1632.

h. G1625 prior to G1631; G1632 prior G1633-36 (in order).

i. G1601, G1603-6, and G1612 prior to G1637; G1631 and G1636 prior to G1638.

j. G1636 prior to G1639; G1638 prior to G1640-41 (in order).

k. G1639 prior to G1642.

2. Events

G1601	MIL	Flight Planning Introduction and Overview	0.5
G1602	MIL	Weather Requirements	1.5
G1603	MIL	DD-175	0.5
G1604	MIL	Jet Logs	1.0
G1605	MIL	INAV Turnpoint Procedures	1.0
G1606	MIL	IFR Navigation 1	1.0
G1607	Lect	TP-8 Brief	0.5
G1608	Lect	TP-8 Planning Lab	1.0
G1609	Lect/ 2B47	TP-8 Fly (Turn Point Voice Procedures, EFR Calculations)	2.5
G1610	Lect	TP-8 Debrief	1.0
G1611	Lect	TP-8 DD-175 and Flight Log Critique/Procedures Review	1.0
G1612	Lect	IFR Navigation 2	1.0
G1613	Lect	Day 1 Homework Review	1.0
G1614	Lect	TP-9 Brief	0.5
G1615	Lect	TP-9 Planning Lab	1.0
G1616	Lect/ 2B47	TP-9 Fly (Stopover Flight Plan)	2.5
G1617	Lect	TP-9 Debrief	1.0
G1618	Lect	TP-9 DD-175 and Flight Log Critique/Procedures Review	1.0
G1619	Lect	Day 2 Homework Review	1.0
G1620	Lect	TP-10 Brief	0.5
G1621	Lect	TP-10 Planning Lab	1.0

2. Events (cont)

G1622	Lect/ 2B47	TP-10 Fly (Terminal Area Delay)	2.5
G1623	Lect	TP-10 Debrief	1.0
G1624	Lect	TP-10 DD-175 and Flight Log Critique/Procedures Review	1.0
G1625	Lect	Day 3 Homework Review	1.0
G1626	Lect	TP-11 Brief	0.5
G1627	Lect	TP-11 Planning Lab	1.0
G1628	Lect/ 2B47	TP-11 Fly (Localizer Approach, Terminal Area Delay)	2.5
G1629	Lect	TP-11 Debrief	1.0
G1630	Lect	TP-11 DD-175 and Flight Log Critique/Procedures Review	1.0
G1631	Lect	Day 4 Homework Review	1.0
G1632	Lect	TP-12 Brief	0.5
G1633	Lect	TP-12 Planning Lab	1.0
G1634	Lect/ 2B47	TP-12 Fly (Change in Flight Plan)	2.5
G1635	Lect	TP-12 Debrief	1.0
G1636	Lect	TP-12 DD-175 and Flight Log Critique/Procedures Review	1.0
G1637	MIL	Flight Line Preparation Lecture	0.5
G1638	MIL	Flight Planning Exam Review	1.0
G1639	Lect	TP-13 Practical Exam Brief	0.5
G1640	Test	Flight Planning Exam	1.5

2. Events (cont)

G1641	Lect	Flight Planning Exam Remediation/Critique	1.5
G1642	Lect/ 2B47	TP-13 Practical Final Exam	1.5

3. Syllabus Notes. None.

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
I01	Class	Instrument Navigation Flight Support	3	13.0	INAVFP

1. Prerequisites

a. G1637 (Flight Line Preparation Lecture) prior to I0101-3 (any order).

b. G1641 (Flight Planning Exam Remediation/Critique) prior to I0101-3 (any order).

c. G1642 (TP-13 Practical Final Exam) prior to I0101-3 (any order).

2. Events

I0101	MIL	T-6A Instrument Navigation Flight Preparation	5.5
I0102	SS/UTD	Instrument Navigation Cockpit Familiarization Study	1.5
I0103	SS	Instrument Navigation Event Rehearsal Study	6.0

3. Syllabus Note. I0102 should be accomplished in the UTD without an instructor (formally scheduled event).

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
N01	Class/ SS	Visual Navigation Flight Support	10	39.0	VNAVFP

1. Prerequisites

a. I4190 prior to N0101-5 (any order).

b. N0101-3 and N0105 prior to N0106-8 (in order).

c. N0108 prior to N0109-10 (any order).

2. Events

N0101	MIL	Visual Navigation Flight Planning	3.0
N0102	CAI	Automated Flight Planning	3.0
N0103	MIL/Lab	Chart Instruction/Prep	8.0
N0104	SS	Chart Prep Time	8.0
N0105	MIL	Flight Procedures	4.0
N0106	MIL	Visual Navigation Exam Review	2.0
N0107	Test	Visual Navigation Exam	2.0
N0108	Lect	Visual Navigation Exam Remediation/Critique	0.5
N0109	SS/UTD	Visual Navigation Cockpit Familiarization Study	1.5
N0110	SS	Visual Navigation Event Rehearsal Study	7.0

3. Syllabus Note. N0109 should be accomplished in the UTD without an instructor (formally scheduled event).

4. Discuss Items. None.

Blk #	Media	Title	Events	Hrs	Blk Name
F01	Class	Section Fundamentals Flight Support	9	15.5	SECTFP

1. Prerequisites

a. I4204 prior to F0101-4 (any order).

b. F0101-4 prior to F0105-7 (in order).

c. F0107 prior to F0108-9 (any order).

2. Events

F0101	CAI	Section Fundamentals Flight Principles	0.5
F0102	CAI	Section Fundamentals Flight Procedures	1.5
F0103	CAI	Section Fundamentals Visual Signals	1.0
F0104	MIL	Section Fundamentals Preparation and Flight Procedures	3.0
F0105	MIL	Section Fundamentals Exam Review	1.5
F0106	Test	Section Fundamentals Exam	1.0
F0107	Lect	Section Fundamentals Exam Remediation/Critique	0.5
F0108	SS/UTD	Section Fundamentals Cockpit Familiarization Study	1.5
F0109	SS	Section Fundamentals Event Rehearsal Study	5.0

3. Syllabus Note. F0108 should be accomplished in the UTD without an instructor (formally scheduled event).

4. Discuss Items. None.

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Chapter III

NATOPS Training

This chapter does not apply to the UMFO Primary 1 and Primary 2 phases of training.

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Chapter IV

Contact Training

1. General. Initial instruction should focus on determining the instructional approach best suited for each student's problem areas so that mission profiles can be flown to correct deficient areas. Although the MIF does not require consistent student proficiency on the more complicated maneuvers until the instructional unit prior to check ride, students must show continued improvement as they progress in training. Regardless of the end-of-unit MIF requirements, overall mission grades must reflect the student's progress toward meeting training requirements.

2. Pattern Training. Utilize the overhead/break traffic pattern as much as possible for pattern training.

3. Navigation. When possible, home and auxiliary field departures and recoveries should be visual with the assistance of the local area map. Weather may require the instructor to use navigational aids in place of visual navigation.

4. Seating. Students shall occupy the front seat for all events in the stage, except the Night Contact event. Students shall occupy the rear seat during C4101, Night Contact.

5. Matrices. The following matrix is an overview of the entire Contact 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.

6. Stage MIF

░ Simulator/Device Event
▒ Check Ride Event
CTS REF “N” = NATOPS

CONTACT STAGE MANEUVER ITEM FILE					
CTS REF	**MANEUVER**	**C2003**	**C4004**	**C4101**	**C4290**
1	General Knowledge/Procedures	3+	4+	4+	4+
2	Emergency Procedures		4+	4+	4+
3	Headwork/Situational Awareness		3+	3+	3+
4	BAR		4+	3+	4+
N	Strap-In/Interior Inspection	3+			
8	Ground Procedures		4+	2+	4+
9	Radio Procedures	3+	4+	3+	4+
N	Engine Start	3+			
N	Start Malfunctions	3+			
N	Fire Warning on the Ground	3+			
N	Emergency Ground Egress	3+			
N	Before Taxi/Taxi Checklists	3+			
N	Overspeed Governor Check	3+			
N	Before Takeoff/Lineup Checks	3+			
N	Takeoff Abort	3+			
N	Emergency Engine Shutdown (Ground)	3+			
10	Takeoff		4+	1	4+
11	Departure		4+	2	4+
N	After Takeoff/Climb Checklists	3+			
N	Operations Check	3+			
12	In-Flight Checks		4+	4+	4+
13	Use of Controls/Trim		3+	2+	3+
14	Basic Transitions		4+	2	4+

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE					
CTS REF	**MANEUVER**	**C2003**	**C4004**	**C4101**	**C4290**
15	Visual Scan/Lookout Doctrine		4+	3	4+
17	In-Flight Planning/Area Orientation		4+	2	4+
18	Level Speed Change		4+	2	4
19	Turn Pattern		4+	2	4
20	Power-Off Stall		4+		4
21	Approach Turn Stall		4+		4+
22	Spin		3+		3+
23	Simulated Power Loss		3+		3+
24	PPEL		3+	2	3
N	Descent/Before Landing Checklists	3+			
25	Landing Pattern		4+	2	4+
26	Landings		2+	2	2+
27	Go Around/Waveoff		3+	2	3+
N	After Landing/Engine Shutdown Checklists	3+			
N	Uncommanded Propeller Feather	3+			
N	Engine Failure During Flight	3+			
N	Compressor Stalls	3+			
N	PMU Failure	3			
N	Fire Warning in Flight	3+			
N	Generator/Battery Bus Failure	3			
N	Low Fuel Pressure	3+			
N	OBOGS Inoperative	3			
N	Smoke or Fume Elimination	3+			
N	Oil System Malfunctions	3+			

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE					
CTS REF	**MANEUVER**	**C2003**	**C4004**	**C4101**	**C4290**
N	Use of Canopy Fracturing System	3+			
28	Course Rules		4+	2	4
N	Hydraulic Malfunctions	3			
N	Trim System/TAD Failure	3			
N	Canopy Unlocked	3			
N	Ejection	3+			
N	Inadvertent Departure From Controlled Flight	3+			
N	Landing Gear Emergency Extension	3+			
N	Emergency Landing Pattern	3+			
N	Precautionary Emergency Landing	3+			
	Special Syllabus Requirements		1		1

Blk #	Media	Title	Events	Hrs	H/X
C20	UTD/OFT	Cockpit Procedure Training	3	4.5	1.5

1. Prerequisites

a. G0103-6 and G0108 (Administration).

b. G0201 (Airsickness Management Program) and G0202 (T-6A Ejection/Egress Brief and Trainer).

c. G0303 (T-6A VFR Communications).

d. G0401 (T-6A Crew Resource Management).

e. G0603 (Aviation Safety Program), G0604 (Navy Flight Policy), and G0605 (Flight Regulations and Policy).

f. G1009 (Metro Exam Remediation/Critique).

g. G1211 (Canopy and Ejection System CAIs and T-6A Cockpit Familiarization 2).

h. C0106 and C0107 (Contact SS).

2. Syllabus Notes

a. C2001. Demonstrate simulator console operation (per local instructions).

b. The student will perform the following procedures on the indicated event.

C2001
Cockpit familiarization – includes complete strap-in; rudder pedal and seat adjustments; location of cockpit displays, switches, and engine controls; standby instruments; interior inspection; start checklist (include one GPU start); start malfunctions/abort start procedure; before taxi/taxi checklists; overspeed governor check; before takeoff checklist; lineup check; after takeoff checklist; operations check; climb checklist; descent checklist; before landing checklist; after landing checklist; engine shutdown checklist; radio procedures; OBOGS inoperative; and inadvertent departure from controlled flight.

C2002
All normal operating procedures, radio procedures, fire warning on the ground, emergency engine shutdown (ground), emergency ground egress/use of canopy fracturing system, aborted takeoff, fire warning in flight, generator/battery bus failure, low fuel pressure, oil system malfunctions, ELP, and PEL.

C2003
All normal operating procedures, radio procedures, uncommanded propeller feather, engine failure during flight, compressor stall, smoke or fume elimination, hydraulic malfunctions, canopy unlocked, ejection, emergency landing gear extension, and ELP (with PEL).

3. Special Syllabus Requirements. None.

4. Discuss Items

C2001
Simulator curriculum, student responsibilities for future simulator events, ATFs/grading procedures, conduct of event, strapping in, all normal checklists, and communication procedures.

C2002
ELP, CFS, all BOLDFACE emergency procedures, and general discussion of all planned items from paragraph 2b/C2002.

C2003
Ejection and the ejection decision, PMU, generator/battery bus inoperative, flight line expectations, and general discussion of all planned items from paragraph 2b/C2003.

5. Block MIF

CTS REF	MANEUVER	C2003
1	General Knowledge/Procedures	3+
N	Strap-In/Interior Inspection	3+
9	Radio Procedures	3+
N	Engine Start	3+
N	Start Malfunctions	3+
N	Fire Warning on the Ground	3+
N	Emergency Ground Egress	3+
N	Before Taxi/Taxi Checklists	3+
N	Overspeed Governor Check	3+
N	Before Takeoff/Lineup Checks	3+
N	Takeoff Abort	3+
N	Emergency Engine Shutdown (Ground)	3+
N	After Takeoff/Climb Checklists	3+
N	Operations Check	3+
N	Descent/Before Landing Checklists	3+
N	After Landing/Engine Shutdown Checklists	3+
N	Uncommanded Propeller Feather	3+
N	Engine Failure During Flight	3+
N	Compressor Stalls	3+
N	PMU Failure	3
N	Fire Warning in Flight	3+
N	Generator/Battery Bus Failure	3
N	Low Fuel Pressure	3+
N	OBOGS Inoperative	3
N	Smoke or Fume Elimination	3+
N	Oil System Malfunctions	3+
N	Use of Canopy Fracturing System	3+
N	Hydraulic Malfunctions	3
N	Trim System/TAD Failure	3

MIF continued on next page.

CTS REF	MANEUVER	C2003
N	Canopy Unlocked	3
N	Ejection	3+
N	Inadvertent Departure From Controlled Flight	3+
N	Landing Gear Emergency Extension	3+
N	Emergency Landing Pattern	3+
N	Precautionary Emergency Landing	3+

Blk #	Media	Title	Events	Hrs	H/X
C40	T-6A	Day Contact	4	6.0	1.5

1. Prerequisite. C1001 (Contact Indoc. Fam. (FAM-0)).

2. Syllabus Notes. The purpose of this block is to motivate the student for the T-6A phase of training and provide exposure to the T-6A flight line training environment and operations. Emphasis should be placed on preflight briefings and procedural recall/execution.

3. Special Syllabus Requirements

C4001
Anti-G straining maneuver.

C4002, C4003, or C4004
Tower-controlled field operations and no flap, takeoff flap, and landing flap landings.

4. Discuss Items

C4001
NATOPS operating limitations, NATOPS ground emergencies, CFS, takeoff procedures, basic transitions, turn pattern, LSC, ATS, POS, trim, landing gear emergency extension, RMU/backup UHF control head operation, ejection, MOA, CRM, and any EP, any limitation.

C4002
Tower-controlled field operations, spins, OLF break entry, OLF operations, Navy landing pattern, hydraulic system and malfunctions, engine failure immediately after takeoff (suitable landing area available), uncommanded prop feather, canopy unlocked, any EP, and any limitation.

C4003
PEL and ELP, engine failure during flight, immediate airstart (PMU norm), fire warning in flight, rapid decompression, any EP, and any limitation.

C4004
Fuel system failures, OBOGS inoperative, inadvertent departure from controlled flight, review contact maneuver procedures, any EP, and any limitation.

5. Block MIF

CTS REF	MANEUVER	C4004
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
8	Ground Procedures	4+
9	Radio Procedures	4+
10	Takeoff	4+
11	Departure	4+
12	In-Flight Checks	4+
13	Use of Controls/Trim	3+
14	Basic Transitions	4+
15	Visual Scan/Lookout Doctrine	4+
17	In-Flight Planning/Area Orientation	4+
18	Level Speed Change	4+
19	Turn Pattern	4+
20	Power-Off Stall	4+
21	Approach Turn Stall	4+
22	Spin	3+
23	Simulated Power Loss	3+
24	PPEL	3+
25	Landing Pattern	4+
26	Landings	2+
27	Go Around/Waveoff	3+
28	Course Rules	4+
	Special Syllabus Requirements	1

Blk #	Media	Title	Events	Hrs	H/X
C41	T-6A	Night Contact	1	1.5	1.5

1. Prerequisite. C4003.

2. Syllabus Note. Initial takeoff should be no earlier than 30 minutes after official sunset.

3. Special Syllabus Requirements. None.

4. Discuss Items. Airport lighting, night ground operations, night hand signals, T-6A interior and exterior lighting, tower Aldis lamp signals, night vision, battery and generator failure.

5. Block MIF

CTS REF	MANEUVER	C4101
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	3+
8	Ground Procedures	2+
9	Radio Procedures	3+
10	Takeoff	1
11	Departure	2
12	In-Flight Checks	4+
13	Use of Controls/Trim	2+
14	Basic Transitions	2
15	Visual Scan/Lookout Doctrine	3
17	In-Flight Planning/Area Orientation	2
18	Level Speed Change	2
19	Turn Pattern	2
24	PPEL	2
25	Landing Pattern	2
26	Landings	2
27	Go Around/Waveoff	2
28	Course Rules	2

Blk #	Media	Title	Events	Hrs	H/X
C42	T-6A	Day Contact Check Ride	1	1.5	1.5

1. Prerequisite. C4004.

2. Syllabus Notes. Aerobatics will be a demonstration item only. SNFO will be responsible for briefing the maneuver set-up parameters.

3. Special Syllabus Requirements. Precision aerobatics/AGSM.

4. Discuss Items. Precision aerobatics, any previously discussed items, any EP, and any limitation.

5. Block MIF

CTS REF	MANEUVER	C4290
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
8	Ground Procedures	4+
9	Radio Procedures	4+
10	Takeoff	4+
11	Departure	4+
12	In-Flight Checks	4+
13	Use of Controls/Trim	3+
14	Basic Transitions	4+
15	Visual Scan/Lookout Doctrine	4+
17	In-Flight Planning/Area Orientation	4+
19	Turn Pattern	4
20	Power-Off Stall	4
21	Approach Turn Stall	4+
22	Spin	3+
23	Simulated Power Loss	3+
24	PPEL	3
25	Landing Pattern	4+
26	Landings	2
27	Go Around/Waveoff	3+
28	Course Rules	4
	Special Syllabus Requirement	1

Chapter V

Instrument Training

1. Seating. Students shall occupy the rear cockpit during this stage.

2. Matrices. The following matrices provide an overview of the Primary 1 and 2 Instrument Navigation Stages. The purpose of these matrices 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. Instrument Navigation 1 Stage MIF

░ Simulator/Device Event
▒ Check Ride Event

INSTRUMENT NAVIGATION 1 STAGE MANEUVER ITEM FILE

CTS REF	MANEUVER	I3009	I4005	I4190
1	General Knowledge/Procedures	4+	4+	4+
2	Emergency Procedures	4+	4+	4+
3	Headwork/Situational Awareness	3+	3+	3+
4	BAR	4+	4+	4+
5	Brief/Debrief	3+	3+	3+
6	Mission Planning	3+	3+	3+
7	NFO Responsibilities	4+	4+	4+
8	Ground Procedures	4+	4+	4+
9	Radio Procedures	3+	3+	3+
11	Departure	4+	4+	4+
12	In-Flight Checks	4+	4+	4+
30	Use of ATIS/PMSV/FSS	3+	3+	3+
31	In-Flight Computations	4+	4+	4+

MIF continued on next page.

INSTRUMENT NAVIGATION 1 STAGE MANEUVER ITEM FILE

CTS REF	MANEUVER	I3009	I4005	I4190
32	CRM/Crew Coordination	3+	3+	3+
33	In-Flight Briefings	4+	4+	4+
34	Enroute Procedures	4+	4+	4+
35	Point-to-Point	3+	3+	3+
36	Arcing	3+	4+	4
37	Holding (VOR)	3+	3+	3
38	Holding (GPS)	3+	3+	3
39	VOR Approach	3+	3+	3
40	GPS Approach	3+	3+	3
41	Localizer Approach	3+	3	3
42	ILS Approach	3+	3+	3
43	Circling Approach	3	3+	3
44	RA/GCA	3+	3+	3
45	Missed Approach	3+	3+	3+
46	Instrument Turnpoint Procedures	3+	3+	3+
	Special Syllabus Requirements		1	

4. Instrument Navigation 2 Stage MIF

▨ Simulator/Device Event

INSTRUMENT NAVIGATION 2 STAGE MANEUVER ITEM FILE

CTS REF	MANEUVER	I3102	I4204
1	General Knowledge/Procedures	4+	4+
2	Emergency Procedures	4+	4+
3	Headwork/Situational Awareness	3+	4+
4	BAR	4+	4+

MIF continued on next page.

INSTRUMENT NAVIGATION 2 STAGE MANEUVER ITEM FILE			
CTS REF	**MANEUVER**	**I3102**	**I4204**
5	Brief/Debrief	4+	4+
6	Mission Planning	4+	4+
7	NFO Responsibilities	4+	4+
8	Ground Procedures	4+	4+
9	Radio Procedures	4+	4+
11	Departure	4+	4+
12	In-Flight Checks	4+	4+
30	Use of ATIS/PMSV/FSS	4+	4+
31	In-Flight Computations	4+	4+
32	CRM/Crew Coordination	3+	4+
33	In-Flight Briefings	4+	4+
34	Enroute Procedures	4+	4+
35	Point-to-Point	3+	4+
36	Arcing	4	4
37	Holding (VOR)	4	4
38	Holding (GPS)	3+	4+
39	VOR Approach	4	4
40	GPS Approach	3+	4+
41	Localizer Approach	4	4+
42	ILS Approach	3+	4+
43	Circling Approach	4	4
44	RA/GCA	4+	4+
45	Missed Approach	4+	4+
46	Instrument Turnpoint Procedures	4+	4+

Blk #	Media	Title	Events	Hrs	H/X
I30	UTD/OFT	Instrument Navigation 1	9	13.5	1.5

1. Prerequisite. I0101-3 (Instrument Navigation Flight Support).

2. Syllabus Notes

a. Introduce and practice instrument navigation enroute procedures and instrument approach procedures.

b. Students shall prepare and have available a DD-175 and flight log for each event.

c. Once the student has met MIF on critical items, introduce real-world situations.

3. Special Syllabus Requirements. None.

4. Discuss Items

I3001
NFO responsibilities, crew coordination, direct to a VOR, DRAFT procedures, radar approaches, and missed approach/climbout procedures.

I3002
Approach plates, VOR/DME holding, arcing, VOR approach, instrument scan, and instrument checklist.

I3003
Radar vectors to final, ILS approach, localizer approach, timing adjustments from FAF to MAP, and any EP.

I3004
VOR holding, full procedure turn approach, and intercept techniques.

I3005
Loading GPS flight plan, GPS approach, and any EP.

I3006
Standard instrument departure, high-altitude airways structure, pilot's discretion descent, VOR approach procedures, and lost communications.

I3007
Non-radar environment communications procedures, ILS approach procedures, and emergency divert.

I3008
Localizer approach procedures, radar approach procedures, localizer back course approach, and any EP.

I3009
Loading GPS flight plan, GPS approach procedures, STARs, and unusual attitudes/vertigo.

5. Block MIF

CTS REF	MANEUVER	I3009
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	3+
6	Mission Planning	3+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	3+
11	Departure	4+
12	In-Flight Checks	4+
30	Use of ATIS/PMSV/FSS	3+
31	In-Flight Computations	4+
32	CRM/Crew Coordination	3+
33	In-Flight Briefings	4+
34	Enroute Procedures	4+
35	Point-to-Point	3+

MIF continued on next page.

CTS REF	MANEUVER	I3009
36	Arcing	3+
37	Holding (VOR)	3+
38	Holding (GPS)	3+
39	VOR Approach	3+
40	GPS Approach	3+
41	Localizer Approach	3+
42	ILS Approach	3+
43	Circling Approach	3
44	RA/GCA	3+
45	Missed Approach	3+
46	Instrument Turnpoint Procedures	3+

Blk #	Media	Title	Events	Hrs	H/X
I40	T-6A	Instrument Navigation 1	5	10.0	2.0

1. Prerequisite. I3009.

2. Syllabus Notes

a. Flights should be flown as local events, but may be flown as out-and-in or cross-country events based on squadron requirements.

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

c. Students should plan to fly a minimum of two instrument approaches per flight.

d. Night Contact flight (C4101) shall be accomplished prior to any night instrument flights (I40XX).

3. Special Syllabus Requirements

I4001
GPS usage (load flight plan in GPS).

4. Discuss Items

I4001
High/Low chart symbology, lost communication procedures, emergency engine shutdown, abort, and procedure turn approaches.

I4002
Special use airspace, engine failure immediately after takeoff, engine failure during flight, and missed approach/climbout procedures.

I4003
Immediate airstart (PMU NORM), uncommanded propeller feather, and departure procedure versus radar vectors.

I4004
Base ops planning (AP-1, NOTAMs, weather minimums for takeoff, approach, alternate), CTAF usage, and ejection.

I4005
Any EP, Class A operations, TCN, use of FSS/PMSV (in-flight change of flight plan, activate flight plans, and update weather).

5. Block MIF

CTS REF	MANEUVER	I4005
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	3+
6	Mission Planning	3+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	3+
11	Departure	4+
12	In-Flight Checks	4+
30	Use of ATIS/PMSV/FSS	3+
31	In-Flight Computations	4+
32	CRM/Crew Coordination	3+
33	In-Flight Briefings	4+
34	Enroute Procedures	4+
35	Point-to-Point	3+
36	Arcing	4+
37	Holding (VOR)	3+
38	Holding (GPS)	3+
39	VOR Approach	3+
40	GPS Approach	3+
41	Localizer Approach	3
42	ILS Approach	3+
43	Circling Approach	3+
44	RA/GCA	3+

MIF continued on next page.

CTS REF	MANEUVER	I4005
45	Missed Approach	3+
46	Instrument Turnpoint Procedures	3+
	Special Syllabus Requirements	1

Blk #	Media	Title	Events	Hrs	H/X
I41	T-6A	Instrument Navigation 1 Check Ride	1	2.0	2.0

1. Prerequisites

    a. I4005.

    b. C4101.

2. Syllabus Notes

    a. A minimum of two approaches shall be performed.

    b. Students shall prepare and have available a DD-175 and flight log for both primary and alternate routes.

3. Special Syllabus Requirements. None.

4. Discuss Items. Divert, any emergency procedure, and any instrument navigation procedure.

5. Block MIF

CTS REF	MANEUVER	I4190
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	3+
6	Mission Planning	3+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	3+
11	Departure	4+
12	In-Flight Checks	4+
30	Use of ATIS/PMSV/FSS	3+
31	In-Flight Computations	4+
32	CRM/Crew Coordination	3+
33	In-Flight Briefings	4+
34	Enroute Procedures	4+
35	Point-to-Point	3+
36	Arcing	4
37	Holding (VOR)	3
38	Holding (GPS)	3
39	VOR Approach	3
40	GPS Approach	3
41	Localizer Approach	3
42	ILS Approach	3
43	Circling Approach	3
44	RA/GCA	3
45	Missed Approach	3+
46	Instrument Turnpoint Procedures	3+

Blk #	Media	Title	Events	Hrs	H/X
I31	UTD/OFT	Instrument Navigation 2	2	3.0	1.5

1. Prerequisites. Completion of Primary 1 and selection for Carrier Aviation.

2. Syllabus Notes

a. Build on and practice instrument navigation enroute procedures and instrument approach procedures.

b. Students shall prepare and have available a DD-175 and flight log for each event.

c. Scenarios stress real-world situations.

3. Special Syllabus Requirements. None.

4. Discuss Items

I3101
Departure procedures, STARs, and any EP.

I3102
GPS procedures, any EP, and any instrument procedure.

5. Block MIF

CTS REF	MANEUVER	I3102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	4+
6	Mission Planning	4+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	4+
11	Departure	4+
12	In-Flight Checks	4+
30	Use of ATIS/PMSV/FSS	4+
31	In-Flight Computations	4+
32	CRM/Crew Coordination	3+
33	In-Flight Briefings	4+
34	Enroute Procedures	4+
35	Point-to-Point	3+
36	Arcing	4
37	Holding (VOR)	4
38	Holding (GPS)	3+
39	VOR Approach	4
40	GPS Approach	3+
41	Localizer Approach	4
42	ILS Approach	3+
43	Circling Approach	4
44	RA/GCA	4+
45	Missed Approach	4+
46	Instrument Turnpoint Procedures	4+

Blk #	Media	Title	Events	Hrs	H/X
I42	T-6A	Instrument Navigation 2	4	8.0	2.0

1. Prerequisite. I3102.

2. Syllabus Notes

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

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

3. Special Syllabus Requirements. None.

4. Discuss Items

I4201
OPNAVINST 3710.7U takeoff minimums, OPNAVINST 3710.7U fuel requirements, any EP, and any limitation.

I4202
OPNAVINST 3710.7U alternate requirements, position reports, any EP, and any limitation.

I4203
Operations away from home field, approach lighting systems, any EP, and any limitation.

I4204
Icing, descent planning, any instrument procedure, any EP, and any limitation.

5. Block MIF

CTS REF	MANEUVER	I4204
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	BAR	4+
5	Brief/Debrief	4+
6	Mission Planning	4+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	4+
11	Departure	4+
12	In-Flight Checks	4+
30	Use of ATIS/PMSV/FSS	4+
31	In-Flight Computations	4+
32	CRM/Crew Coordination	4+
33	In-Flight Briefings	4+
34	Enroute Procedures	4+
35	Point-to-Point	4+
36	Arcing	4
37	Holding (VOR)	4
38	Holding (GPS)	4+
39	VOR Approach	4
40	GPS Approach	4+
41	Localizer Approach	4+
42	ILS Approach	4+
43	Circling Approach	4
44	RA/GCA	4+
45	Missed Approach	4+
46	Instrument Turnpoint Procedures	4+

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Chapter VI

Navigation Training

1. Seating. Students shall occupy the rear seat for all events in the stage. Instructors shall occupy the front seat. Instructors shall carry a current VFR sectional chart.

2. Matrices. The following matrix is an overview of the entire Navigation 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

░	Simulator/Device Event
▒	Check Ride Event

VNAV/PA STAGE MANEUVER ITEM FILE

CTS REF	MANEUVER	N3002	N4003	N4190
1	General Knowledge/Procedures	4+	4+	4+
2	Emergency Procedures	4+	4+	4+
3	Headwork/Situational Awareness	3+	3+	3+
4	BAR	4+	4+	4+
5	Brief/Debrief	3+	4+	4+
6	Mission Planning	3+	4+	4+
7	NFO Responsibilities	4+	4+	4+
8	Ground Procedures	3+	4+	4+
9	Radio Procedures	3+	3+	3+
11	Departure	3+	4+	4+
12	In-Flight Checks	3+	4+	4+
15	Visual Scan/Lookout Doctrine	3	4+	4+

MIF continued on next page.

VNAV/PA STAGE MANEUVER ITEM FILE

CTS REF	MANEUVER	N3002	N4003	N4190
16	SUA/VNAV Route Entry/Exit Procedures	3+	3+	3+
28	Course Rules	4	4	4
29	PA/AGSM	3	3+	3+
30	Use of ATIS/PMSV/FSS	4+	4+	4+
31	In-flight Computations	4+	4+	4+
32	CRM/Crew Coordination	3+	4+	4+
39	VOR Approach	3	3	3
40	GPS Approach	3	3	3
41	Localizer Approach	3	3	3
42	ILS Approach	3	3	3
43	Circling Approach	3	3	3
44	RA/GCA	3	3	3
45	Missed Approach	3	3	3
47	VNAV Chart	3+	4+	4+
48	Turnpoint Identification	3+	4+	4+
49	VNAV Turnpoint Procedures	3+	4+	4+
50	Checkpoint Utilization/Correlation	3+	4+	4+
51	Hazard Calls	3+	4+	4+
52	Course Analysis/Corrections	3+	3+	3+
53	Timing Analysis/Speed Corrections	3+	3+	3+
54	Altitude Selection/Compliance	3+	4+	4+
55	Fuel Management/Analysis	3+	4+	4+
56	Wind Analysis/Compensation		3+	3+
57	Target Acquisition	3+	4+	4+

Blk #	Media	Title	Events	Hrs	H/X
N30	OFT	Visual Navigation (VNAV)/ Precision Aerobatics (PA)	2	3.0	1.5

1. Prerequisites

   a. N0104 (Chart Prep TIme).

   b. N0109 and N0110 (Visual Navigation SS).

2. Syllabus Notes

   a. VFR event in the T-6A Operational Flight Trainer.

   b. Plan to arrive at target with a precise ETA.

   c. Students will not use radio NAVAIDs or GPS while on the route.

3. Special Syllabus Requirements. None.

4. Discuss Items

N3001
Ensure SNFO understands Course Training Standards, simulator wind analysis limitations, event OFT configuration settings, time and course corrections, turnpoint procedures, fix-correct-assess process, and 6-minute rule.

N3002
Same discuss items as N3001 (above), terrain clearance tasks, mission tasks and differences in IFR/VFR clearances.

5. Block MIF

CTS Ref	MANEUVER	N3002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	3+
6	Mission Planning	3+

MIF continued on next page.

CTS Ref	MANEUVER	N3002
7	NFO Responsibilities	4+
8	Ground Procedures	3+
9	Radio Procedures	3+
11	Departure	3+
12	In-Flight Checks	3+
15	Visual Scan/Lookout Doctrine	3
16	SUA/VNAV Route Entry/Exit Procedures	3+
28	Course Rules	4
29	PA/AGSM	3
30	Use of ATIS/PMSV/FSS	4+
31	In-flight Computations	4+
32	CRM/Crew Coordination	3+
39	VOR Approach	3
40	GPS Approach	3
41	Localizer Approach	3
42	ILS Approach	3
43	Circling Approach	3
44	RA/GCA	3
45	Missed Approach	3
47	VNAV Chart	3+
48	Turnpoint Identification	3+
49	VNAV Turnpoint Procedures	3+
50	Checkpoint Utilization/Correlation	3+
51	Hazard Calls	3+
52	Course Analysis/Corrections	3+
53	Timing Analysis/Speed Corrections	3+
54	Altitude Selection/Compliance	3+
55	Fuel Management/Analysis	3+
57	Target Acquisition	3+

Blk #	Media	Title	Events	Hrs	H/X
N40	T-6A	VNAV/PA	3	6.0	2.0

1. Prerequisite. N3002.

2. Syllabus Notes

a. VFR on local area VNAV routes.

b. Plan to arrive at target with a precise ETA.

c. Students will not use radio NAVAIDs or GPS while on the route.

d. In order to grade PA on any single syllabus event, three of the following maneuvers shall be executed in flight: aileron roll, wingover, barrel roll, loop, half-Cuban eight, Immelmann, and split-S.

e. To the maximum extent possible, PA should be graded on each flight in-block.

f. A minimum of three instrument approaches shall be accomplished in-block.

3. Special Syllabus Requirements. None.

4. Discuss Items

N4001
VFR chart interpretation/symbology, emergency field selection, airspace classification (Class A, B, C, D, E, G), wind analysis/compensation, Area 1 utilization, AGSM, precision aerobatics, and any EP.

N4002
Navigation from home field to Pt A, Area 2F transit procedures, lost aircraft procedures, VFR flight following, IFR pickup, low-level emergency procedures, low-level ejection, bird strike, and wind analysis/compensation.

N4003
Off-station operations and maintenance, VFR lost communications (FIH), VFR minimums/cloud clearances, fuel minimums (SOP versus OPNAVINST 3710.7U), VFR field entry/departure, and any EP.

5. Block MIF

CTS Ref	MANEUVER	N4003
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	4+
6	Mission Planning	4+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	3+
11	Departure	4+
12	In-Flight Checks	4+
15	Visual Scan/Lookout Doctrine	4+
16	SUA/VNAV Route Entry/Exit Procedures	3+
28	Course Rules	4
29	PA/AGSM	3+
30	Use of ATIS/PMSV/FSS	4+
31	In-flight Computations	4+
32	CRM/Crew Coordination	4+
39	VOR Approach	3
40	GPS Approach	3
41	Localizer Approach	3
42	ILS Approach	3
43	Circling Approach	3
44	RA/GCA	3

MIF continued on next page.

CTS Ref	MANEUVER	N4003
45	Missed Approach	3
47	VNAV Chart	4+
48	Turnpoint Identification	4+
49	VNAV Turnpoint Procedures	4+
50	Checkpoint Utilization/Correlation	4+
51	Hazard Calls	4+
52	Course Analysis/Corrections	3+
53	Timing Analysis/Speed Corrections	3+
54	Altitude Selection/Compliance	4+
55	Fuel Management/Analysis	4+
56	Wind Analysis/Compensation	3+
57	Target Acquisition	4+

Blk #	Media	Title	Events	Hrs	H/X
N41	T-6A	VNAV/PA Check Ride	1	2.0	2.0

1. Prerequisite. N4003.

2. Syllabus Notes

a. VFR on local area VNAV routes.

b. Plan to arrive at target with a precise ETA.

c. Students will not use radio NAVAIDs or GPS while on the route.

d. A minimum of one instrument approach shall be accomplished on this check ride.

3. Special Syllabus Requirements. None.

4. Discuss Items. Any EP, any system, and any VNAV procedure.

5. Block MIF

CTS Ref	MANEUVER	N4190
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	4+
6	Mission Planning	4+
7	NFO Responsibilities	4+
8	Ground Procedures	4+
9	Radio Procedures	3+
11	Departure	4+
12	In-Flight Checks	4+
15	Visual Scan/Lookout Doctrine	4+

MIF continued on next page.

CTS Ref	MANEUVER	N4190
16	SUA/VNAV Route Entry/Exit Procedures	3+
28	Course Rules	4
29	PA/AGSM	3+
30	Use of ATIS/PMSV/FSS	4+
31	In-flight Computations	4+
32	CRM/Crew Coordination	4+
39	VOR Approach	3
40	GPS Approach	3
41	Localizer Approach	3
42	ILS Approach	3
43	Circling Approach	3
44	RA/GCA	3
45	Missed Approach	3
47	VNAV Chart	4+
48	Turnpoint Identification	4+
49	VNAV Turnpoint Procedures	4+
50	Checkpoint Utilization/Correlation	4+
51	Hazard Calls	4+
52	Course Analysis/Corrections	3+
53	Timing Analysis/Speed Corrections	3+
54	Altitude Selection/Compliance	4+
55	Fuel Management/Analysis	4+
56	Wind Analysis/Compensation	3+
57	Target Acquisition	4+

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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 Fundamentals 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

░ Simulator/Device Event

SECTION FUNDAMENTALS STAGE MANEUVER ITEM FILE			
CTS REF	**MANEUVER**	**F3001**	**F4002**
1	General Knowledge/Procedures	3+	3+
2	Emergency Procedures	3+	3+
3	Headwork/Situational Awareness	3+	3+
4	BAR	4+	4+
5	Brief/Debrief	3+	3+
6	Mission Planning	3+	3+
7	NFO Responsibilities	3+	3+
8	Ground Procedures	3+	3+
9	Radio Procedures	3+	3+
11	Departure	3+	4+
12	In-Flight Checks	3+	4+
15	Visual Scan/Lookout Doctrine	3	4+
17	In-Flight Planning/Area Orientation	3	3+
28	Course Rules	4	4

MIF continued on next page.

SECTION FUNDAMENTALS STAGE MANEUVER ITEM FILE			
CTS REF	**MANEUVER**	**F3001**	**F4002**
30	Use of ATIS/PMSV/FSS	4+	4+
32	CRM/Crew Coordination	3+	3+
33	In-flight Briefings	3+	3+
58	Taxi and Marshal	3+	3+
59	Formation Takeoff		3+
60	Wingman Communication	3+	3+
61	Section Management/Flight Leadership		3+
62	Section Fuel Management	4+	4+
63	VOR/Geographic Rendezvous	3+	3
64	Parade Position	3+	3+
65	Breakup and Rendezvous	3+	3+
66	Underrun	3+	3+
67	Lead Change		3+
68	Lost Sight	3+	3+
69	Cruise Position	3+	3+
70	Tail-Chase	3+	3+
71	Tactical Formation/Maneuvering	3+	3+
72	Rejoin	3+	3+
73	Section Break		3+
74	Section Approach		3+

Blk #	Media	Title	Events	Hrs	H/X
F30	OFT	Section Fundamentals	1	1.5	1.5

1. Prerequisite. F0108 and F0109 (Section Fundamentals SS).

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Item. Lead/wing responsibilities, section radio procedures, section maneuvering and positions, hand signals, prop form area procedures (confines of R-2908 VFR), VOR/ geographic rendezvous, aborted takeoff, midair collision, NORDO, HEFOE visual signals, down aircraft procedures, lost sight, and blind.

5. Block MIF

CTS REF	MANEUVER	F3001
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	3+
6	Mission Planning	3+
7	NFO Responsibilities	3+
8	Ground Procedures	3+
9	Radio Procedures	3+
11	Departure	3+
12	In-Flight Checks	3+
15	Visual Scan/Lookout Doctrine	3
17	In-Flight Planning/Area Orientation	3
28	Course Rules	4
30	Use of ATIS/PMSV/FSS	4+
32	CRM/Crew Coordination	3+

MIF continued on next page.

CTS REF	MANEUVER	F3001
33	In-flight Briefings	3+
58	Taxi and Marshal	3+
60	Wingman Communication	3+
62	Section Fuel Management	4+
63	VOR/Geographic Rendezvous	3+
64	Parade Position	3+
65	Breakup and Rendezvous	3+
66	Underrun	3+
68	Lost Sight	3+
69	Cruise Position	3+
70	Tail-Chase	3+
71	Tactical Formation/Maneuvering	3+
72	Rejoin	3+

Blk #	Media	Title	Events	Hrs	H/X
F40	T-6A	Section Fundamentals	2	3.0	1.5

1. Prerequisite. F3001.

2. Syllabus Notes

a. Students shall conduct the brief and debrief for both flights in block.

b. To the maximum extent possible, the parade sequence should be accomplished on F4001 and tactical formation/ maneuvering should be accomplished on F4002.

c. A minimum of two section approaches shall be accomplished in block to include each student executing at least one approach from lead position and at least one approach from wing position.

3. Special Syllabus Requirements. None.

4. Discuss Items

F4001
Parade sequence and section emergency procedures.

F4002
Tactical formation procedures and section emergency procedures.

5. Block MIF

CTS REF	MANEUVER	F4002
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Brief/Debrief	3+
6	Mission Planning	3+
7	NFO Responsibilities	3+

MIF continued on next page.

CTS REF	MANEUVER	F4002
8	Ground Procedures	3+
9	Radio Procedures	3+
11	Departure	4+
12	In-Flight Checks	4+
15	Visual Scan/Lookout Doctrine	4+
17	In-Flight Planning/Area Orientation	3+
28	Course Rules	4
30	Use of ATIS/PMSV/FSS	4+
32	CRM/Crew Coordination	3+
33	In-flight Briefings	3+
58	Taxi and Marshal	3+
59	Formation Takeoff	3+
60	Wingman Communication	3+
61	Section Management/Flight Leadership	3+
62	Section Fuel Management	4+
63	VOR/Geographic Rendezvous	3
64	Parade Position	3+
65	Breakup and Rendezvous	3+
66	Underrun	3+
67	Lead Change	3+
68	Lost Sight	3+
69	Cruise Position	3+
70	Tail-Chase	3+
71	Tactical Formation/Maneuvering	3+
72	Rejoin	3+
73	Section Break	3+
74	Section Approach	3+

Chapter VIII

Tactical Training

This chapter does not apply to the UMFO Primary 1 and Primary 2 phases 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 Primary 1 and Primary 2 phases.

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 VMC maneuvers in conjunction with visual clearing.

b. Unless otherwise specified, use BAR standards for all items with altitude, airspeed or heading parameters.

c. “Standard” equates to ***good*** (G/4).

d. Momentary deviations outside CTS 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	
● A brief description of the behavior, required action, and/or conditions.	● The specific standards for the action. May be read as “The SNFO…”

6. Graded Items. The MIF for specific graded items varies for each stage. Several items are graded on all complete syllabus events. The standards for these universally graded items are listed first.

7. Course Training Standards

BEHAVIOR STATEMENT	STANDARDS
1. General Knowledge/Procedures	
● Maintain working knowledge of all appropriate flight training instructions and directives.	● 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.
2. Emergency Procedures	
● Perform critical action emergency procedures. ● Maintain in-depth knowledge of all NATOPS emergency procedures. ● Utilize the Pocket Checklist IAW NATOPS and FTI guidelines.	● 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.

BEHAVIOR STATEMENT	STANDARDS
3. Headwork/Situational Awareness	
● Comply with the FTI, SOP, and NATOPS while maintaining situational awareness commensurate with safety-of-flight and mission objectives.	● 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 (BAR)	
● 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.	● 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: ▶ Maintain aircraft within 100 feet, 10 KIAS, ±5° of assigned altitudes, speeds, and headings, respectively. ▶ Initiate/direct level-off from all climbs/descents.

BEHAVIOR STATEMENT	STANDARDS
5. Brief/Debrief	
• Prepared 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.	• 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.
6. Mission Planning	
• 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.	• 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, FLIP publications, NOTAMs) prior to brief. • Accurately adjusts mission profile based on current and forecast weather.

BEHAVIOR STATEMENT	STANDARDS
7. NFO Responsibilities	
• Accomplish required in-flight duties.	• 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.
8. Ground Procedures	
• Begins when departing for the aircraft and ends when cleared for takeoff. • Begins again when aircraft clears the runway and ends when Before Leaving Aircraft Checklist is complete.	• 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.
9. Radio Procedures	
• Effectively communicate via the use of UHF/VHF radios and ICS as required. • Use standard terminology IAW AIM/FAR and FTIs.	• Understands and responds to 90 percent of incoming calls. • Communicates clearly and concisely with appropriate agencies using standard military and FAA terminology.

BEHAVIOR STATEMENT	STANDARDS
10. Takeoff	
● Begins when cleared for takeoff and ends when After Takeoff Checklist complete and climb power and airspeed are established.	● Performs/directs takeoff procedures IAW NATOPS, FTI, and SOP. ▶ Ensures MAX power is set. ▶ Ensures computed MIN power at 60 KIAS is met. ▶ Ensures rotation is initiated at 85 KIAS. ▶ Ensures proper takeoff attitude is met. ● Monitors engine instruments and annunciator panel and reports abnormalities. ● Ensures gear retraction after verifying two positive rates of climb and flap retraction after verifying a minimum of 110 KIAS and prior to exceeding aircraft limitations.
11. Departure	
● 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.	● 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	
● Accomplish in-flight checks IAW NATOPS, FTI, and SOP.	● Identifies nearest divert field. ● Perform operations check at least every 20 minutes.
13. Use of Controls/Trim	
● Properly trim the aircraft as required by changes in airspeed, power, or configuration.	● Attempts to maintain balanced flight and trims in the correct sequence: rudder, elevator, and aileron.

BEHAVIOR STATEMENT	STANDARDS
14. Basic Transitions	
• Performs/directs/ ensures proper climbs, descents, and level-offs.	• Initiates level-off at the correct altitude IAW FTI, using PAT principle. • Performs clearing turns for climbs and descents greater than 1000 feet, as appropriate.
15. Visual Scan/Lookout Doctrine	
• Maintain lookout doctrine essential for safe ground/airborne operations. • Direct aircraft control and effective visual navigation, relying primarily on outside references. • Keep visual scan outside the cockpit to the maximum extent practicable for safe aircraft operation, traffic, terrain hazards and hazard/ weather avoidance.	• Directs aircraft maneuvers to safely avoid actual or potential conflicts. • Alerts crew to ground/airborne hazards (i.e., traffic, weather, birds, and obstacles). • Locates visual checkpoints to aid effective and safe navigation.

BEHAVIOR STATEMENT	STANDARDS
16. SUA/VNAV Route Entry/Exit Procedures	
• Perform entry/exit procedures for SUA or VNAV route IAW FTI, briefing, and local standards. • Properly use visual cues and navigational aids to identify the route or SUA entry/exit point. • Use descent procedures (planned or unplanned) to control timing to the entry point.	• Performs required duties during entry and exit from SUA or VNAV route. • Contacts airspace control authority and uses appropriate comms to gain clearance to enter/exit controlled airspace. • Acquires and flies to the entry point, using offsets as necessary to start the route on the desired outbound heading. • For restricted area operations, contacts range authority for entry/exit clearance and uses appropriate comms IAW FTI and local standards. • Directs adherence to published or directed entry/exit restrictions with respect to altitude (to include VFR hemispheric altitudes), heading, airspeed, position, squawk, etc. • Arrives at the entry point ±4 minutes of briefed time.
17. In-Flight Planning/Area Orientation	
• Visually navigate and remain in the confines of designated MTR, MOA, or working area/SUA. • Remain within the MTR vertical/lateral confines as prescribed in the AP/1B.	• Maintains appropriate boundaries and altitude block within a working area as required. • Remains aware of aircraft position in designated working area. • Directs headings and plans maneuvers to keep aircraft in the confines of the designated working area.

BEHAVIOR STATEMENT	STANDARDS
18. Level Speed Change	
● Perform/direct level speed change procedures.	● Executes/directs the level speed change procedures in a timely manner IAW the FTI with 100 percent accuracy. ● Commences in normal cruise configuration on any numbered heading. ● Completes the Before Landing Checklist during the maneuver. ● Makes appropriate BAR calls whether at the controls or not.
19. Turn Pattern	
● Perform/direct turn pattern procedures.	● Executes/directs turn pattern procedures IAW the FTI with 100 percent accuracy. ● Commences in normal cruise or slow cruise on a cardinal heading. ● Makes appropriate BAR calls to include maintaining bank angle ±10° whether at the controls or not.
20. Power-Off Stall	
● Perform/direct power-off stall procedures.	● Performs/directs power-off stall procedures IAW the FTI with 100 percent accuracy. ● Commences in normal cruise configuration. ● Establishes aircraft in proper 125 KIAS, power-off glide attitude. ● Makes appropriate BAR calls whether at the controls or not. ● Initiates/directs recovery at first indication of an impending stall.

BEHAVIOR STATEMENT	STANDARDS
21. Approach Turn Stall	
• Perform/direct ATS procedures.	• Performs/directs ATS procedures IAW the FTI with 100 percent accuracy. • Commences in the downwind configuration. • Completes the Before Landing Checklist during the maneuver. • Initiates/directs recovery at first indication of stall at/above 6000 feet AGL. • Verifies positive climb and reports, "aircraft climbing."
22. Spin	
• Perform/direct spin procedures.	• Performs/directs spin procedures IAW the FTI with 100 percent accuracy. • Commences in slow cruise configuration. • Clearly communicates correct spin indications over ICS. • Initiates/directs/verifies proper recovery procedures after verifying stabilized spin indications or reaching 12,500 feet AGL (whichever occurs first).

BEHAVIOR STATEMENT	STANDARDS
23. Simulated Power Loss	
● Perform/direct simulated engine failure procedures, given simulated power loss indications above 3000 feet AGL.	● Performs/directs simulated power loss procedures IAW the FTI with 100 percent accuracy. ● Immediately recognizes the power loss and verbalizes all required boldface procedures for the given situation with 100 percent accuracy. ● Selects suitable landing site, if available. ● Effectively navigates the aircraft to intercept ELP. ● Ensures proper glide speeds +10/-5 KIAS.
24. Practice Precautionary Emergency Landing	
● Given simulated condition requiring PEL, perform/direct PPEL procedures.	● Performs/directs PPEL procedures IAW the FTI with 100 percent accuracy. ● Immediately recognizes the emergency condition and verbalizes all required boldface procedures for the given situation with 100 percent accuracy. ● Selects and effectively navigates to the nearest suitable landing site. ● Manages/monitors airspeed as appropriate for climb or acceleration to high key. ● Ensures 125 +10/-5 KIAS prior to configuration. ● Ensures clean configuration for climb, configures at appropriate time for landing, and completes the Before Landing Checklist prior to touchdown.

BEHAVIOR STATEMENT	STANDARDS
25. Landing Pattern	
• Perform/direct landing pattern IAW the FTI. • If from initial, from rolling out on downwind to final. • If from takeoff, touch-and-go, or waveoff, commencing the crosswind turn to final.	• Ensures proper downwind configuration and spacing. • Performs/directs transition, trim, turn, and talk at the 180. • Makes appropriate BAR calls except: ▶ Maximum 45° AOB. ▶ TO Flap: ▪ 115 +10/-0 KIAS from 180 until final. ▪ 105 +10/-0 KIAS until beginning landing flare. ▶ LDG Flap: ▪ 110 +10/-0 KIAS from 180 until final. ▪ 100 +10/-0 KIAS until beginning landing flare. ▶ No-Flap: ▪ 120 +10/-0 KIAS from 180 until final. ▪ 110 +10/-0 KIAS until beginning landing flare. ▶ Ensures Before Landing Checklist complete.

BEHAVIOR STATEMENT	STANDARDS
26. Landings	
● Perform/direct normal landing per the FTI. ● From crossing runway threshold until touch-and-go, commencing crosswind turn.	● Performs/directs safe landing procedures IAW NATOPS, FTI, and local procedures. ● Attempts/directs: correct glidepath until flare initiation. ● Attempts/directs touchdown with: ▶ Appropriate crosswind controls. ▶ Main gear first (nose-high attitude). ▶ Nose gear ±10 feet of centerline. ● Recognizes the touchdown zone as defined by FTI and local instructions. ● Performs/directs full-stop or touch-and-go procedures per FTI. ● Makes landing rollout calls until aircraft reaches 40 KIAS, as appropriate (This is not required in the Contact phase).
27. Go Around/Waveoff	
● When appropriate, discontinue approach to landing.	● Initiates/directs waveoff when required by the FTI and/or safety-of-flight to include: ▶ Conflicting with PEL traffic. ▶ Stall warning system actuates (stick shaker) or airframe buffet. ▶ Aircraft requires more than 45-degree AOB to avoid overshooting final. ● Ensures positive climb and configuration during waveoff.
28. Course Rules	
● Return to home field in accordance with local procedures.	● Obtains ATIS information. ● Conducts recovery briefing. ● Visually navigates via published routing with minimal discrepancies.

BEHAVIOR STATEMENT	STANDARDS
29. Precision Aerobatics/Anti-G Straining Maneuver	
● Recall in-flight PA maneuver entry parameters. ● Perform proper AGSM.	● Directs the setup configuration (proper airspeed and altitude) to begin the maneuver IAW FTI with 100 percent accuracy. ● Executes AGSM in flight without error.
30. Use of ATIS/PMSV/FSS	
● Use ATIS/PMSV to update destination conditions IAW the FTI. ● Use FSS as required to open, change, and close flight plans.	● Checks ATIS prior to contacting destination approach control. ● Updates destination and alternate weather with PMSV/AWOS/FSS enroute, when required. ● Contacts FSS to: ▶ Open flight plans after departure. ▶ Change flight plans enroute. ▶ Close flight plans after landing.
31. In-Flight Computations	
● Compute IAW the FTI: ▶ Ground speed. ▶ ETE (to turnpoints). ▶ Fuel at destination IAF.	● Computes: ▶ Ground speed ±12 knots. ▶ ETA ±1 minute. ▶ Fuel at destination IAF within ±30 pounds of instructor calculations.
32. Crew Resource Management/Crew Coordination	
● Use available crew and cockpit resources to minimize workload and enhance situational awareness. ● Effectively communicate mission essential information between crewmembers. ● Build crew awareness with timely and effective descriptive comm.	● 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.

BEHAVIOR STATEMENT	STANDARDS
33. In-Flight Briefings	
● Accomplish in-flight briefings IAW the FTI.	● 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.
34. Enroute Procedures	
● 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.	● Maintains positional awareness using ground references, navigational aids, VFR charts, or FLIP publications. ● Determines approximate wind direction ±30° and ±15 knots and maintains proper crab angle ±5°. ● Gives position reports as required. ● Leads turns when applicable IAW FTI. ● Maintain within 2 NM of course centerline between all NAVAIDs and fixes. ● Correctly identifies NAVAID station, GPS waypoint, or intersection passage.
35. Point-to-Point	
● Proceed direct to an assigned fix using PTP procedures.	● Expeditiously directs an initial heading ±30° to the fix. ● Continuously updates heading to: ▶ Avoid large (>20°) heading changes within two minutes prior. ▶ Arrive within 2 NM of desired point.

BEHAVIOR STATEMENT	STANDARDS
36. Arcing	
● Direct per FTI: ▶ VOR/DME arcing. ▶ Arc-to-radial intercepts. ▶ Radial-to-arc intercepts.	● Maintains the arc ±0.5 DME. ● Calculates lead points IAW FTI to join: ▶ Arc ±0.5 DME. ▶ Radial ±3°.
37. Holding (VOR)	
● Direct VOR holding IAW the FTI.	● 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.
38. Holding (GPS)	
● Direct GPS holding IAW the FTI.	● 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
39. VOR Approach	
● Direct an approach IAW the FTI.	● IAF to FAF maintains course ±1 dot or valid intercept. ● Properly directs the pilot to slow and take basic approach configuration IAW the FTI. ● By the FAF (when depicted) or initiating descent to MDA, completes landing checklist. ● Final: ▶ Maintains ±1 dot of desired course. ▶ Reaches and maintains MDA +100/-0 feet. ● 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
40. GPS Approach	
● Direct a GPS approach IAW the FTI.	● IAF to FAF maintains course ±1 dot or valid intercept. ● 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 FAF: ▶ Completes landing checklist. ▶ Ensures approach goes active prior to descent from FAF. ● Final: ▶ Maintains ±1 dot of desired course. ▶ Reaches and maintains MDA +100/-0 feet. ● 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
41. Localizer Approach	
● Direct a localizer approach IAW the FTI.	● By the FAF or initiating descent to MDA, completes landing checklist. ● Final: ▶ Maintains ±1 dot of desired course localizer. ▶ Reaches and maintains MDA +100/-0 feet. ▶ Begins backup timing at the FAF when applicable. ● 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.
42. ILS Approach	
● Direct the approach IAW the FTI.	● Prior to initiating descent to DA, completes landing checklist. ● Final: ▶ 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
43. Circling Approach	
● Direct a circling maneuver to the landing runway IAW the FTI.	● 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.
44. Radar Approach/Ground-Controlled Approach	
● Direct the pilot, as needed, to properly comply with the FTI parameters of a PAR or ASR approach.	● Responds quickly and correctly to controller instructions. ● Ensures lost communication and missed approach/climbout instructions are received prior to starting descent to DA or MDA. ● By glideslope intercept or descent to the MDA, completes landing checklist. ● Determines if the aircraft is in a position to execute a safe landing upon 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 ±3°.

BEHAVIOR STATEMENT	STANDARDS
45. Missed Approach	
● Direct a missed approach per the FTI.	● Directs appropriate missed approach procedure when field not in sight and, ▶ Nonprecision: ▪ Inside FAF and full-scale CDI deflection. ▪ At specified MAP DME. ▪ At expiration of timing in the absence of DME. ▶ Precision, first of: ▪ DA. ▪ Controller-directed. ▶ Or, not in position for safe landing.
46. Instrument Turnpoint Procedures	
● Perform instrument turnpoint calls.	● Makes appropriate two-minutes-prior, mark-on-top, and wings-level calls using proper format and terminology IAW FTI with 80 percent accuracy. ● Gives a wind-corrected outbound heading for a course, when able. ● Updates navigation aids appropriately.

BEHAVIOR STATEMENT	STANDARDS
47. VNAV Chart	
● Prepare a visual navigation chart. ● Demonstrate chart/route knowledge.	● Prepares a visual navigation chart, given a route and a TPC, to an accuracy of ±15 pounds (fuel), ±30 seconds overall and ±20 seconds at each turnpoint (time), and ±2° plotting (course) 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 TP circle, hazards on route, and all altitude changes.
48. Turnpoint Identification	
● Identify turnpoints on a visual route.	● Identifies visual turnpoints IAW FTI to an accuracy of 67 percent.
49. VNAV Turnpoint Procedures	
● Perform VNAV turnpoint calls.	● Makes appropriate VNAV two-minutes-prior, mark-on-top, and wings-level calls using proper format and terminology with 80 percent accuracy.
50. Checkpoint Utilization/Correlation	
● Identify/use visual intermediate checkpoints to determine aircraft position. ● Use visually distinct terrain features as aids to navigation. ● Maintain SA and position on flight planned route as required.	● Identifies intermediate checkpoints to an accuracy of 50 percent. ● Uses terrain and selected cultural/noncultural features to aid visual navigation so as to maintain position accuracy within 2 NM. ● Maintains positional awareness during route of flight using clock-chart-ground correlation.

BEHAVIOR STATEMENT	STANDARDS
51. Hazard Calls	
● Perform hazard calls IAW FTI. ● Inputs and monitors traffic advisory frequency for hazard airfields.	● Calls 90 percent of known hazards using proper format and terminology. ● Clears aircraft of weather, birds, hazards, 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.
52. Course Analysis/Corrections	
● Determine aircraft position in relation to intended course. ● Perform standard course corrections to correct back to the specified course line IAW FTI. ● Navigate on a specified visual route using dead reckoning/visual cues to correct back to planned course.	● Correlates visual references with aircraft position to an accuracy of 1 NM. ● Timely and accurately applies 80 percent of course corrections IAW FTI. ● Directs appropriate heading change to return to course ±2° of IP calculations.

BEHAVIOR STATEMENT	STANDARDS
53. Timing Analysis/Speed Corrections	
● 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.	● Directs arrival at route entry point to ±4 minutes of scheduled entry time. ● Gives a time hack during brief. ● Timely and accurately implements 80 percent of speed corrections in the correct magnitude, time, and direction. ● Calculates and initiates timing corrections to within ±5 knots and ±6 seconds of IP calculations. ● Arrives at the target within ±1 minute from preflight real-world time on target.
54. Altitude Selection/Compliance	
● Select the proper altitude to and from visual route. ● Maintain route altitude IAW FTI.	● Ensures aircraft maintains VFR hemispheric altitudes. ● Directs climbs two minutes prior to the turnpoint.
55. Fuel Management/Analysis	
● Maintain fuel awareness throughout flight. ● Determine fuel state and any fuel consumption trends. ● Calculate Joker/Bingo/ MCF. ● Monitor fuel state and direct deviations, if needed, to accomplish mission goals and land with adequate fuel reserves IAW OPNAVINST 3710.7U and SOP.	● 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.

BEHAVIOR STATEMENT	STANDARDS
56. Wind Analysis/Compensation	
● Determine wind direction and magnitude using course trend and time analysis. ● Correctly compensate for current wind condition on each leg.	● Determines approximate wind direction ±30° and ±10 knots and maintains proper crab angle ±5°. ● Correctly applies crab and airspeed compensations for headwinds and crosswinds to 80 percent accuracy.
57. Target Acquisition	
● Acquire and fly to the target.	● 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 ±1/2 NM.
58. Taxi and Marshal	
● Perform taxi and marshal flight.	● Performs IAW FTI. ● Lead monitors wingman's position.
59. Formation Takeoff	
● Perform section or interval takeoff.	● Performs IAW FTI. ● Lead: ▶ Monitors wingman. ▶ Directs appropriate type of takeoff for weather/runway conditions. ● Wing: Advises IP of airspeeds, fuel, engine, and gear status.
60. Wingman Communication	
● Safely and effectively communicate with wingman using radio/ visual/aircraft.	● Correctly uses and interprets hand signals. ● Performs IAW FTI to 90 percent accuracy.

BEHAVIOR STATEMENT	STANDARDS
61. Section Management/Flight Leadership	
● Plan and execute a parade/tacform sequence of maneuvers. ● Understand current and required position. ● Accomplishes/directs ADMIN/TAC ADMIN tasks in a timely manner.	● Lead ▶ Maintains section inside the confines of assigned working area. ▶ Efficiently sequences and directs maneuvers. ▶ Adjusts mission profile for external factors (weather, traffic, etc.).
62. Section Fuel Management	
● Monitor fuel status for section to allow for safety of flight and mission accomplishment.	● Lead: ▶ Conducts fuel checks as required by FTI or every 20 minutes. ▶ Ensures that flight is completed IAW SOP/NATOPS/FTI fuel requirements. ● Lead/wing: Recognizes and calls JOKER/BINGO fuel as necessary with 100 percent accuracy.
63. VOR/Geographic Rendezvous	
● Join up to parade position while lead is maintaining constant heading or in constant AOB turn at a VOR fix or over a ground reference point.	● Recalls procedures with 100 percent accuracy IAW FTI. ● Effectively navigates to the prebriefed rendezvous point. ● Visually acquires the lead aircraft. ● Continuously monitors join-up and advises IP of deviations. ● Directs underrun procedures as necessary.
64. Parade Position	
● Identify and maintain proper position.	● Recognizes parameters IAW FTI: ▶ Lower UHF antenna on pitot tube. ▶ Near pitot tube on prop arc. ● Ensures correct position for IFR/VFR turns.

BEHAVIOR STATEMENT	STANDARDS
65. Breakup and Rendezvous	
● Conduct breakup and rendezvous IAW FTI.	● Recalls procedures IAW FTI with 100 percent accuracy. ● Calls out airspeeds during rendezvous. ● Continuously monitors join-up and advises IP of deviations. ● Directs underrun procedures as necessary.
66. Underrun	
● Recognize/direct underrun as necessary for safety of flight or training.	● Recognizes the need to underrun. ● Recalls/directs procedures IAW FTI with 100 percent accuracy.
67. Lead Change	
● Execute an expeditious and safe lead change IAW FTI.	● Considers airspace and weather in planning maneuvers. ● Performs IAW FTI.
68. Lost Sight	
● Execute simulated lost wingman procedures IAW FTI.	● Wing: Immediately directs IP to execute procedures. ● Executes procedures with 100 percent accuracy IAW the FTI.
69. Cruise Position	
● Identify and maintain proper position.	● Ensures aircraft maintains position IAW FTI: ▶ Within 60° bearing cone. ▶ 1- to 3-plane widths. ▶ 20 feet of stepdown. ● Ensures aircraft is within range to receive visual signals.

BEHAVIOR STATEMENT	STANDARDS
70. Tail-Chase	
● Execute tail-chase profile IAW FTI.	● Advises IP of wingman’s position and status. ● Advises IP of aircraft parameters including airspeed, altitude, and Gs. ● Attempts to maintain sight of wingman throughout maneuver. ● Clears for the section. ● Calls altitudes IAW FTI when within 1500 feet of airspace boundary. ● Lead: ▶ Ensures section G-warm complete prior to tail-chase maneuvering. ▶ Directs flight to remain within assigned area.
71. Tactical Formation/Maneuvering	
● Engaging turns used to maneuver a section when in combat spread.	● Lead: ▶ Conducts section G-warm prior to tactical maneuvering. ▶ 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. ▶ Ensures deconfliction from Lead. ▶ Checks six o’clock position.

BEHAVIOR STATEMENT	STANDARDS
72. Rejoin	
● Reform to parade while lead is maintaining constant heading or in constant AOB turn.	● 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.
73. Section Break	
● Conduct VFR recovery and break (3-sec or fan break).	● Performs/directs recovery and break IAW FTI, Course Rules, FAR/AIM, and NATOPS.
74. Section Approach	
● Execute an instrument or visual straight-in approach as lead or wingman.	● Recalls procedures with 100 percent accuracy IAW FTI. ● Lead: ▶ Maintains contact or instrument parameters and procedures. ▶ Utilizes wingman consideration. ● Wingman performs IAW FTI.

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Chapter X

Master Materials List

Individually Issued Materials

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT
1. Academic Programmed Instructional Units	CNAT P	10
2. Flight Training Instructions	CNAT P	6
3. T-6A NATOPS Flight Manual	NAVAIR A1-T6A AAA-NFM-100	1
4. T-6A NATOPS Pocket Checklist	NAVAIR 01-T6A AAA-NPCL-100	1
5. NATOPS Instrument Flight Manual		1
6. DOD FLIP Publications		
a. Low Altitude Enroute Charts		3
b. IFR Enroute Supplement		1
c. Low Altitude Instrument Approach Procedures		2
d. High Altitude Instrument Approach Procedures		1
7. Military Flight Plan	DD-175	4
8. Weather Briefing Form	DD-175-1	20
9. Flight Crew Checklist		16

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT
10. Supporting Materials		
a. Navigation/ Landing Aid (2B47)	Instrument Training	6
b. T-6A Aircraft Cockpit	Familiarization Training	6

Aircraft and Major Training Devices

1. T-6A Aircraft.

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

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