

NAVAL AIR TRAINING COMMAND



NAS CORPUS CHRISTI, TEXAS
CIN O-2D-0185/O-2D-0285

CNATRAINST 1542.155B

CHIEF OF NAVAL AIR TRAINING



PRIMARY AND INTERMEDIATE (T-6A) MULTI-SERVICE STUDENT NAVAL FLIGHT OFFICER (SNFO) / COMBAT SYSTEMS OFFICER (SCSO) TRAINING SYSTEM (MNTS) CURRICULUM

2008



DEPARTMENT OF THE NAVY

CHIEF OF NAVAL AIR TRAINING
CNATRA
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CNATRAINST 1542.155B
N711

25 JAN 2008

CNATRA INSTRUCTION 1542.155B

Subj: PRIMARY AND INTERMEDIATE (T-6A) MULTI-SERVICE STUDENT
NAVAL FLIGHT OFFICER (SNFO)/COMBAT SYSTEMS OFFICER (SCSO)
TRAINING SYSTEM (MNTS) CURRICULUM

1. Purpose. To issue the curriculum for training SNFO/SCSO, and International Military Student Navigators in the Primary and Intermediate T-6A phases of undergraduate NFO/CSO Training.
2. Cancellation. CNATRAINST 1542.155A will cancel when the last student finishes the curriculum.
3. Action. This instruction is effective on receipt. No changes will be made without written authorization of the Chief of Naval Air Training (CNATRA).
4. Forms. The Aviation Training Forms required by this directive are computer generated in the Training Management System (TMS2) at TRAWING SIX. This system has been assigned a system form number of CNATRA 1542/2019. When the Training Integration Management System (TIMS) replaces TMS2, the system form number will be CNATRA 1542/2022. CNATRA point of contact is the current Pipeline Training Officer, CNATRA (N711), DSN 861-3193. An update of these forms shall be accomplished no later than the issuance of this curriculum.

A handwritten signature in black ink, appearing to read "J. A. Crabbe".

J. A. CRABBE
Chief of Staff

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Course Data

1. Course Title. Primary and Intermediate (T-6A) Multi-Service SNFO/SCSO Training System (MNTS).
2. Course Identification Number (CIN). Q-2D-0185 (Primary), Q-2D-0285 (Intermediate).
3. Location(s). NAS Pensacola.
4. Course Status. Active.
5. Course Mission. 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 stand-downs, and other expected nonworking days.

	<u>Training Days</u>	<u>Calendar Weeks</u>
a. Primary:	74	16.4
b. Intermediate:	17	3.7
10. Class Capacity. Variable.
11. Instructor Requirements. As established by Chief of Naval Operations (CNO) planning factors.
12. Course Curriculum Model Manager. Commander, Training Air Wing SIX (COMTRAWING SIX).
13. Quota Management Authority. Chief of Naval Air Training.
14. Quota Control. Chief of Naval Operations.

15. Course Training Subjects

a. Primary Ground Training

ADMINISTRATION		
Stage	Symbol	Hours
Welcome Aboard/Orientation/Various Briefs/ Paraloft/Medical Records Check-In/Class Photo	G0101-10	13.35
Totals		13.35

PRIMARY GROUND TRAINING		
Stage	Symbol	Hours
Aviation Safety Program	G0201	1.25
T-6A Ejection/Egress Brief/Trainer	G0202-3	3.00
VFR Communication Procedures	G0301-3	3.50
Crew Resource Management	G0401	3.00
Meteorology	G1001-6	11.50
Meteorology Exam/Critique	G1007	2.00
Aircraft Systems 1	G1101-13	23.50
Aircraft Systems 1 Exam/Critique	G1114	2.00
R) Aircraft Systems 2	G1201-12	15.50
Aircraft Systems 2 Exam/Critique	G1213	2.00
Operating Procedures/NATOPS	G1301-12	18.50
EP Test	G1313	1.50
PR/NATOPS Exam and Critique	G1314	2.00
Instruments 1	G1401-24	32.00
Instruments 1 Exam	G1425	1.50
Instruments 1 Exam, Remediation, Review, and Critique	G1426	1.00
Instruments 2	G1501-13	41.50
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Instruments 2 Exam	G1514	1.50
Flight Planning	G1601-38	46.50
Flight Planning Exam	G1639	1.50
TP-13 Practical Final Exam	G1640	1.50
Flight Planning Exam Review/Remediation/Critique	G1641	1.00
Totals		217.25

R)

b. Primary Flight Support

PRIMARY FLIGHT SUPPORT		
Stage	Symbol	Hours
Contact Flight Preparation	C0101-5	8.5
Contact Flight Preparation	C1001	3.0
Instrument Navigation Flight Preparation	I0101	5.5
Totals		17.0

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

PRIMARY FLIGHT TRAINING						
Flight/Events	UTD/OFT		OFT		T-6 Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Cockpit Procedure Training	3	4.5				
Day Contact					4	6.0
Night Contact					1	1.5
Day Contact Check Ride					1	1.5
Instrument Navigation	9	13.5			13	26.0
Instrument Navigation Check Ride I					1	2.0
Instrument Navigation Check Ride II					1	2.0
TOTAL	12	18.0			21	39.0

d. Intermediate Ground Training. None.

e. Intermediate Flight Support

INTERMEDIATE FLIGHT SUPPORT		
Stage	Symbol	Hours
Visual Navigation Flight Procedures	N0101-4	19.0
Formation Preparation and Flight Procedures	F0101	3.0
Totals		22.0

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

INTERMEDIATE FLIGHT TRAINING						
Flight/Events	UTD/OFT		OFT		T-6 Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Day Visual Navigation			2	3.0	5	10.0
Day Visual Navigation Check Ride					1	2.0
Day Formation					4	7.5
TOTAL			2	3.0	10	19.5

16. Training Time Analysis

ADDITIONAL TRAINING TIME PER CURRICULUM HOUR/EVENT				
Training Area	Brief/Preflight/Taxi	Prep Study	Taxi/Debrief	Total
Flight	1.95	2.0	1.0	4.95
Simulator	0.5	2.0	0.5	3.0
Academic and Flight Support		0.5		0.5

R)

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

18. Obligated Service. Refer to MILPERSMAN Article 661036 for Naval personnel or to Air Force Instruction (AFI) 36-2107 for USAF personnel.

19. Primary Instructional Methods. Lecture, MIL, CAI, 2B47, UTD/OFT, aircraft, facility tours, self- and group-paced study, and in-flight instruction.

20. Preceding Curriculum Data. Replaces CNATRINST 1542.155A.

21. Student Performance Measurement/Application of Standards. The standards outlined in Chapter VIII, Course Training Standards, are used to evaluate student performance of individual items and maneuvers. Final judgment regarding the satisfactory performance of any flight maneuver rests with the instructor pilot who must assess the environmental and systems factors affecting the conditions under which the performance is measured and the student's experience within the stage.

ABBREVIATIONS

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

- a. ACAD - Academic
- b. AGL - Above Ground Level
- c. AGSM - Anti-G Straining Maneuver
- d. AIM - Aeronautical Information Manual
- e. AOB - Angle of Bank
- f. AP - Area Planning
- g. ATC - Air Traffic Control
- h. ATF - Aviation Training Form
- i. ATIS - Automated Terminal Information Service
- j. ATJ - Aviation Training Jacket
- k. ATS - Aviation Training Summary
also Approach Turn Stall
- l. AWOS - Automated Weather Observation System
- m. BAC - Basic Approach Configuration
- m. CAI - Computer-Assisted Instruction
- n. CA - Class Advisor
- o. CBM - Columbus AFB, MS
- p. CFS - Canopy Fracturing System
- q. CHUM - Chart Updating Manual
- r. COMM - Communications
- s. CRM - Crew Resource Management
- t. CTAF - Common Traffic Advisory Frequency
- u. CTS - Course Training Standard
- v. DH - Decision Height
- w. DHN - Dothan Regional, AL
- x. DME - Distance Measuring Equipment

y. DOR - Drop On Request
z. DRAFT - Destination, Route, Altitude, Fuel, Time
aa. ELP - Emergency Landing Pattern
ab. EOB - End of Block
ac. ET - Extra Training
ad. ETA - Estimated Time of Arrival
ae. EP - Emergency Procedure
af. FAA - Federal Aviation Administration
ag. FAF - Final Approach Fix
ah. FAR - Federal Aviation Regulations
ai. FIH - Flight Information Handbook
aj. FLIP - Flight Information Publication
ak. FPC - Final Progress Check
al. FSS - Flight Service Station
am. FTI - Flight Training Instruction
an. FWOP - Fixed-Wing Operating Procedures
ao. GCA - Ground-Controlled Approach
ap. GPS - Global Positioning System
aq. GPU - Ground Power Unit
ar. GS - Ground Speed
as. HEFOE - Hydraulic, Electrical, Fuel, Oxygen, and Engine
at. HFE - Home Field Entry
au. H/X - Hours per X (Event)
av. IAW - In Accordance With
aw. ICS - Intercommunication System
ax. ILS - Instrument Landing System
ay. IP - Instructor Pilot, also Initial Point

az. IPC - Initial Progress Check
ba. IMS - International Military Student
bb. IMSO - International Military Student Officer
bc. LSC - Level Speed Change
bd. MAF - Maintenance Action Form
be. MAP - Missed Approach Point
bf. MCF - Mission Completion Fuel
bg. MDA - Minimum Descent Altitude
bh. MGM - Montgomery Regional, AL
bi. MIF - Maneuver Item File
bj. MIL - Mediated Interactive Lecture
bk. MOA - Military Operating Area
bl. NAS - Naval Air Station
bm. NAVAID - Navigational Aid
bn. NBG - New Orleans NAS JRB, LA
bo. NFO - Naval Flight Officer
bp. NG - No Grade
bq. NM - Nautical Mile
br. NORDO - No Radio
bs. NOTAMs - Notices to Airmen
bt. NPA - Pensacola NAS, FL
bu. NQA - Millington Regional Jetport, TN
bv. NSS - Navy Standard Score
bw. OBOGS - On-Board Oxygen Generating System
bx. OFT - Operational Flight Trainer
by. OLF - Outlying Field
bz. OPSO - Operations Officer
ca. PAS - Phase Aggregate Score

cb.	PCL	-	Pocket Checklist
cc.	PEL	-	Precautionary Emergency Landing
cd.	PMSV	-	Pilot-to-Metro Service
ce.	PMU	-	Power Management Unit
cf.	POS	-	Power-Off Stall
cg.	PTP	-	Point-to-Point
ch.	RIOT	-	Radio Instrument Operational Trainer
ci.	RMU	-	Radio Management Unit
cj.	RRU	-	Ready Room Unsatisfactory
ck.	RT	-	Radial Tracking
cl.	RTB	-	Return-to-Base
cm.	SID	-	Standard Instrument Departure
cn.	SMS	-	Student Monitoring Status
co.	SSR	-	Special Syllabus Requirement
cp.	SOP	-	Standard Operating Procedure
cq.	TCN	-	Terminal Change Notice
cr.	TP	-	Trainer Practical
cs.	TPC	-	Tactical Pilotage Chart
ct.	TRB	-	Training Review Board
cu.	TTO	-	Training Time Out
cv.	UHF	-	Ultra High Frequency
cw.	UTD	-	Unit Training Device
cx.	VDP	-	Visual Descent Point
cy.	VFR	-	Visual Flight Rules
cz.	VNAV	-	Visual Navigation
da.	VOR	-	Very High Frequency Omnidirectional Range

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. Aviation Training Summary. A tabular sheet listing the maneuver item file (MIF) and maneuver grades within a training stage.
5. Block of Training. A sequential series of lessons within a training stage sharing an identical MIF. The third character in the lesson designator identifies a block.
6. Check Ride (SXX90). A flight check in any stage of training.
7. Class Advisor. An instructor pilot assigned by the Flight Leader 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. A description of required behaviors and standards of performance for a specific maneuver. These standards are in Chapter VIII.
11. Courseware. The technical data, flight training instructions, 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) Training Review Board 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 MNTS training for that student. Deliverables indicate whether the quality and continuity of training provided was IAW CNATRAINST 1542.155B, indicate the degree of influence by "human factors" on the student's performance, and make a recommendation on elimination/retention based on those items.

14. End of Block. Last event in block. In order to progress past EOB, the student must meet or exceed MIF on all critical items and all optional items attempted in the block.

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

16. Extra Training (SXX87). Additional student training flights ordered by the Operations Officer, or higher, in order to make up for Squadron/IP instructional deficiencies.

17. Final Progress Check (SXX89). A special check normally given by the Commanding Officer (CO) or Executive Officer (XO). 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 unsatisfactory FPC results in a TRB. An FPC can be the result of an unsatisfactory IPC in the ready room or flight environment or can be command-directed.

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

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

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

21. Initial Progress Check (SXX88). A special check given by the Operations Officer or his representative. A satisfactory IPC returns the student to normal syllabus flow. An unsatisfactory IPC results in an FPC.

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

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

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

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

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

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

(R)

27. 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 elimination process/eliminate.

28. Phase of Training. A major division in the course of training. MNTS consists of primary, intermediate, and advanced phases of training.

29. Pink ATF. An ATF that is pink in color, but otherwise identical to the standard ATF. The pink ATF is used to denote an unsatisfactory event generating a progress check.

30. Progress Check Pilot. An instructor pilot authorized to administer initial or final progress checks.

31. Ready Room Unsatisfactory. An unsatisfactory grade given for inadequate knowledge of flight procedures, systems, discuss items, emergency procedures, or deficient preflight planning.

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

33. Stage of Training. All training of a particular type (Ground, Contact, Instruments, Visual Navigation, Formation) within a phase. The first letter in the lesson designator identifies the stage of each lesson (Example: F4101 is in the formation stage).

34. Standard Operating Procedure. A training wing or squadron directive describing standard operating procedures for local aircraft.

35. Student Monitoring Status. Squadron-initiated status to address substandard student performance.

36. Training Media. MNTS media include aircraft, UTDs, OFTs, ground training, and CAI. The second character in the lesson identifier designates the training medium.

37. 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 elimination.

38. 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.

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 (N712). (R)

c. Deviations. Document all deviations on the event's ATF.

d. Changes. Recommended changes shall be submitted in accordance with (IAW) CNATRAINST 1550.6E.

e. Execution. All students execute Chapters II through VI.

f. Syllabus Description. Primary and Intermediate MNTS is flown in the Primary training platform and is divided into stages. Stages are grouped by like flight training regimes such as Contact and Instrument. Each stage is subdivided into training blocks. The training blocks consist of a specified number of flights. Maneuver item files identify the minimum acceptable level of performance in relation to the CTS that must be achieved at the completion of each training block.

g. Grade Calculation

(1) Phase Aggregate Score (PAS). An NFS's PAS is a comparative ranking based on the previous population of completers for a specific phase or portion of a phase of aviation training. PAS indicates only NFS performance relative to a normative population of other recent NFSs. Under the MNTS system, PAS is not by itself an indication of whether an NFS has met the criteria necessary for winging or continuation in aviation training. PAS is calculated for each block within a curriculum, for the subset of blocks completed by an NFS still in training (Interim PAS), and for the entire phase. (R)

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

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

Where

S - SNFO Score (R)

NMU - SNFO NMU (R)

Acad - SNFO Academic Grades (R)

M1 - Squadron Average Score (R)

M2 - Squadron Average Number of Marginals and Unsats (R)

M3 - Squadron Average Academic Grades (R)

S1 - Standard Deviation of Squadron Score (R)

- R) S2 - Standard Deviation of Squadron NMU
- R) S3 - Standard Deviation of Squadron Academic Grades

R) (2) NSS. NSS is calculated to correct for potential
R) non-normality in the distribution of PAS. NSS is calculated for
R) each block within a curriculum, for the subset of blocks
R) completed by an NFS still in training (Interim NSS), and for the
R) entire phase. NSS is calculated from PAS by using equation (2),
R) below:

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

R) Where

R) PAS - NFS PAS

R) MPAS - Squadron Average PAS

R) SDPAS - Standard Deviation of Squadron PAS

h. Accelerated Students. Students with prior flight time, excluding Naval Flight Officer Introductory Flight Screening (NIFS) or NIFS 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.

2. Training Management

a. Syllabus Progression. Fly syllabus events within each stage sequentially. Do not start a block without all prerequisites. Students may be in different stages simultaneously. Where applicable, students shall be prepared, and will be eligible, for both a Visual Navigation and a Formation event. Students must complete all events. System training management is designed to facilitate two graded events (flight, simulator, or exam) per student per day.

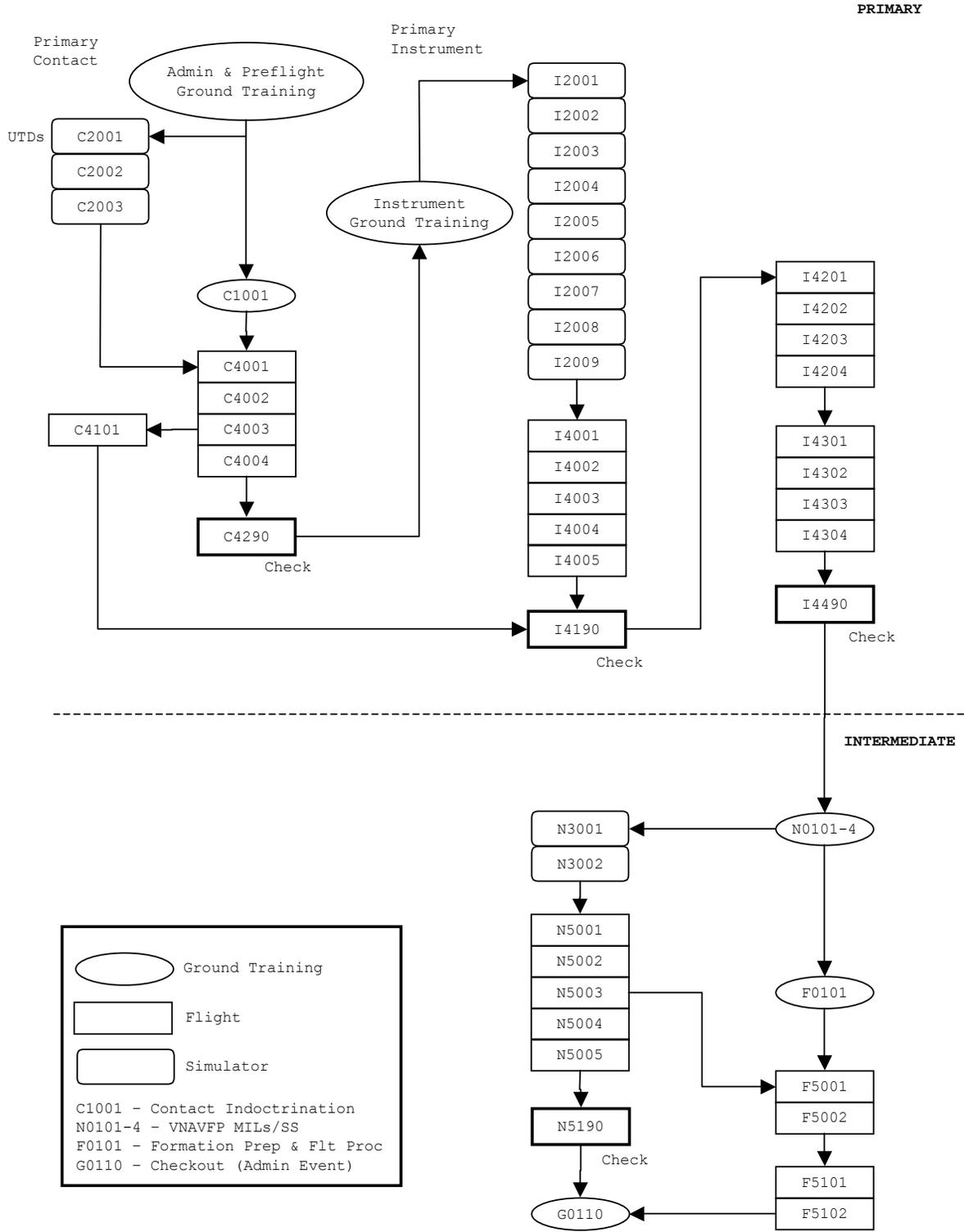
b. Maneuver Continuity. Students must accomplish previously introduced maneuvers frequently enough to ensure maintaining required proficiency.

c. H/X. Instructor pilots (IPs) 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, annotate reason(s) in ATF's general comments section.

d. Special Syllabus Requirements. SSRs are allocated to flights. Unless noted otherwise, IPs may accomplish SSRs on any flight within the block. SSRs shall be completed in the specified block. Annotate completed SSRs in the ATF's SSR comments section. Assign NG/1 as the SSR maneuver grade.

e. ATJ Reviews. Class Advisors, Flight Leaders, or Assistant Flight Leaders will conduct jacket reviews at least monthly. SMS students require weekly ATJ reviews.

COURSE FLOW



3. Unsatisfactory Performance. (See **Progress Check Procedures.**)

a. Flight

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

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

(3) An unsatisfactory check ride (SXX90) or two consecutive unsatisfactory syllabus events result in an IPC. Document the failed check ride or second consecutive unsatisfactory event on a pink ATF for that event.

(4) A subsequent check ride failure, two further consecutive unsatisfactory syllabus events, or an RRU result in an FPC. Document the failed progress check on a pink ATF generating the progress check.

(5) Failing an FPC results in a TRB.

b. Ready Room Unsatisfactory

(1) An 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 unsatisfactory grade in the procedures column. On remediation of unsatisfactory 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 two consecutive unsatisfactory flight events will result in an FPC. Document the failed FPC on a pink ATF generating the Final Progress Check.

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

c. Academic. Failing the same exam twice or failing more than one exam triggers an IPC or FPC as appropriate. The FPC is a Commanding Officer's assessment.

d. Remediation

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

(2) End-of-block unsatisfactory syllabus events in the instrument stage may be cleared in the simulator if these conditions are met:

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

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

e. Restrictions. Until remediating the unsatisfactory:

(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 unsatisfactory 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 elimination/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 IMSS, 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 voting member.

(4) Exclusion. The following conditions exclude an instructor from acting 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 unsatisfactory to the student in the relevant training stage.

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

c. Deliverables

(1) A background paper assessing the student's training quality and highlighting any irregularities.

D)
R) (2) Use CNATRA 1542/1827 (Rev. 4-04), Training Review Board Summary form.

5. Instructor Continuity

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

(1) The Commanding Officer, Executive Officer, Operations Officer, Assistant Operations Officer, Flight Leader, or Assistant Flight Leader 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 flight leader for SMS students.

6. Break in Training Warmup Events (SXX86). Non-syllabus 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., C4186). Warmup grades do not satisfy block or MIF requirements and shall not be included in the cumulative totals. A warmup flight is not warranted for the first flight in a new stage. 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 unsatisfactory, the flight is a warmup.

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

CRITERIA FOR AWARDING WARMUP EVENTS		
Break* (Days)	Warmup Events	Remarks
1-6	None	
7-13	1 Optional	<ul style="list-style-type: none"> ● Based on performance. ● Required if overall event grade is Marginal or Unsatisfactory. ● Prohibited if: <ul style="list-style-type: none"> ▶ Performance meets MIF. ▶ First event in stage.
14	1 Mandatory ----- 1 Optional	----- <ul style="list-style-type: none"> ● Optional warmup based on performance. ● Required if overall grade is Marginal or Unsatisfactory.

*Break = Julian Date - Julian Date last flown

7. Additional Flights/Simulators

a. 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 Operations Officer may authorize one ET prior to an IPC.

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

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

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

(b) International Students. The Operations Officer may authorize additional events to international students IAW CNATRAINST 1500.4G.

(R)

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

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

c. Practice Simulators (SXX85). Students may receive practice simulator events as availability permits. These practice events are not part of the syllabus. If a practice simulator is authorized, the student shall only perform previously introduced maneuvers.

8. Student Monitoring Status

a. The objective 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 Flight Leader 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 for removal from SMS or proceeding with the elimination process. SMS goals should be tailored to correct deficiencies as the Flight Leader and CA determine or to address personal issues as the Operations Officer determines. 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 IPC or FPC.

9. Ground Training And Briefing Requirements

a. Mission Preparation, Briefings, and Debriefings

(1) EOB Events. The IP shall carefully review the Aviation Training Summary (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.

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

(a) A thorough knowledge of:

1. The flight's discuss items, as listed in Chapters II through VI.

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 ATS for the stage.

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

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

(a) Specific objectives.

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

(c) 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 govern the time required for the debrief.

(c) The instructor shall provide the student with a new ATS, and may provide a copy of the event's ATF.

b. Emergency Procedures (EP) Briefing and Training

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

(2) Incorporate emergency procedures 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. Maneuver Item Files listed in the MNTS 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 course training standard. 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.

(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 MNTS. Grade events "Pass," "Marginal," or "Unsatisfactory." Use the following definitions to characterize event grades. See **Awarding Overall Event Grades** for specific rules defining unsatisfactory performance.

R)

(a) Pass

1. Prior to EOB: Progress is adequate to meet standards by EOB.

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

(b) Marginal. Ability to meet the standards by the end of the block is questionable. IPs may not award a Marginal on an EOB event or check ride.

(c) Unsatisfactory. 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 the student's performance against the MIF. The following rules govern overall event grading:

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

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

1. I40 MIF requires an F/3 for Headwork/Situational Awareness. I41 MIF requires a G/4.

2. The student must meet or exceed F/3 to progress out of I40.

3. The student must maintain or exceed F/3 until the last I41 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 allow for uneven progress through training. Regression applies to MIF maintenance between blocks within a stage or between media within a stage. Regression does not apply within a block. The following specifies allowable regression.

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

a. The student has previously demonstrated G/4 proficiency,

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.

R) 2. The IP shall award an overall unsatisfactory due to regression rules if:

a. Regression was to a U/2 where F/3 or G/4 is required.

b. Performance on the same maneuver for two consecutive events resulted in an F/3 where a G/4 is required.

c. There was regression on more than two items.

(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 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, do not incomplete the mission 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 towards the student's PAS.

(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 commander 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 unsatisfactory.

3. Check pilots may allow students to reaccomplish maneuvers.

4. 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.

5. 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:

- R) 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 unsatisfactory if:

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

(c) Unsatisfactory Check Ride - Ground Operations. A check ride graded unsatisfactory solely for ground operations requires a progress check. The Operations Officer 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 MNTS *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 and Ready Room unsatisfactoriness 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 unsatisfactory events in the same stage or three in-block, not including XX87 events. (R)

c. Following an RRU.
d. Following two academic test failures in phase. (R)
(R)

e. Receiving an officer-like qualities (OLQ) unsatisfactory.

2. Operations Officer or above directed when the student's:

a. Potential to complete MNTS is in doubt.

b. OLQs are inadequate.

3. Outcomes are:

a. Passing returns the student to normal syllabus flow.

b. Failing results in an FPC.

4. IPC IPs. The Operations Officer or his representative, usually a designated STAN 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 elimination process" recommendation to the squadron CO. (R)

(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.

failure. c. Following the third academic test

2. Commanding Officer directs FPC when the student's potential to complete MNTS is in doubt.

3. Outcomes are:

a. Passing returns the student to normal syllabus flow.

b. Failing results in a TRB.

4. 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 elimination recommendation to the COMTRAWING.

d. Progress Check Counseling

 (1) Prior to an Initial Progress Check. The student's Flight Leader or the Operations Officer shall counsel the student on the Progress Check Training Review Process and document counseling on a supplemental ATF.

 (2) On Completion of an Initial Progress Check. The IPC IP or Operations Officer 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 Operations Officer (and the Operations Officer was not the IPC IP), document counseling on a supplemental ATF.

 (3) On Satisfactory Completion of a Final Progress Check. The CO or his designated representative will counsel the student. Counseling should consist of the Progress Check Training Review Process, elimination/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.

11. Special Instructions and Restrictions

a. Flight Hour/Event Requirements and Restrictions

(1) Programmed Hours and Events. Syllabus-programmed flight hours are 58.5 hours. Event lengths of SXX86, 87, 88, and 89 events will cause variation. Accomplish all syllabus events.

(2) Minimum Night Hours. N/A.

(3) Minimum Solo Hours. N/A.

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

(5) Maximum Daily Student Activities (Aircraft, Simulator, or Academic). Students shall not exceed two activities during one duty day or three activities 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 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 does not apply to simulator events.

c. Airspace Utilization. Conduct contact and formation events in designated areas. These events may be out-and-ins with Operations Officer 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. If considered more beneficial, these hours may be used for academic training normally conducted early in Primary; however, all prerequisites must be met.

Block	Media	Title	Events	Hrs	Stage
G01	Class	Administration	10	13.35	ASI

1. Events

G0101	MIL	Academic Welcome Aboard		0.75	
G0102	MIL	Academic Procedures Brief		0.75	
G0103	Offline Lect	Commodore's Brief		1.00	
G0104	None	Paraloft		2.00	
G0105	None	Orientation VT-4/10		3.50	
G0106	None	Medical Records Check-In		2.00	
G0107	Lect	Chaplain's Brief		1.00	
G0108	None	Class Photo		0.25	
G0109	MIL	MNTS Brief		2.00	
G0110	None	Checkout		0.1	

2. Syllabus Notes

a. Complete G0101 prior to G0102-9, which can be done in any order.

b. Complete N5190 and F5102 (Intermediate phase) prior to G0110.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
G02-04/ G10-13 C01	Class	Preflight Ground Training	60	97.75	See Below

1. Events

G0201	MIL	Aviation Safety Program		1.25	ASI
G0202	Lect	T-6A Ejection/Egress Brief		1.00	ASI
G0203	Lect	T-6A Ejection/Egress Trainer		2.00	ASI
G0301	MIL	Contact Comm 1		1.00	VFRCOMM
G0302	None	Comm Tower Visit		1.50	VFRCOMM
G0303	MIL	Contact Comm 2		1.00	VFRCOMM
G0401	MIL	Crew Resource Management		3.00	CRM
G1001	JPATS MIL	METARs and TAFs		2.50	METRO
G1002	P/P	Metro Lesson Quiz/Review 1		1.00	METRO
G1003	JPATS MIL	Charts/WX Advisories		2.50	METRO
G1004	JPATS MIL	DD 175-1		1.50	METRO
G1005	P/P	Metro Lesson Quiz/Review 2		2.00	METRO
G1006	P/P	Metro Test Review		2.00	METRO
G1007	CAI	Metro Exam/Critique		2.00	METRO
G1101	JPATS MIL	Intro to T-6 Systems/Intro to CAI		1.00	SYS1
G1102	None	T-6A Aircraft Tour		2.00	SYS1
G1103	JPATS CAI	Flight Controls		1.50	SYS1
G1104	JPATS CAI	Hydraulic Systems, Part 1		1.50	SYS1
G1105	JPATS CAI	Hydraulic Systems, Part 2		1.50	SYS1

Continued on next page.

1. Events (Cont)

G1106	JPATS MIL	Systems Review 1	2.00	SYS1
G1107	JPATS CAI	Flight Instruments, Part 1	2.00	SYS1
G1108	JPATS CAI	Flight Instruments, Part 2	1.50	SYS1
G1109	JPATS CAI	Communication Systems	2.00	SYS1
G1110	JPATS CAI	Navigation Systems	2.00	SYS1
G1111	JPATS CAI	GPS	1.00	SYS1
G1112	JPATS MIL	Systems Review 2	3.50	SYS1
G1113	UTD	T-6A Cockpit Familiarization 1	2.00	SYS1
G1114	CAI Test	SYS 1 Exam and Critique	2.00	SYS1
G1201	JPATS CAI	Electrical System	1.50	SYS2
G1202	JPATS CAI	Fuel System	1.00	SYS2
G1203	JPATS MIL	Electrics and Fuel Review	1.50	SYS2
G1204	JPATS CAI	Propulsion 1	2.00	SYS2
G1205	JPATS CAI	Propulsion 2	1.00	SYS2
G1206	JPATS MIL	Propulsion Review	1.50	SYS2
G1207	JPATS CAI	Environmental System 1	1.00	SYS2
G1208	JPATS CAI	Environmental System 2	0.50	SYS2

Continued on next page.

1. Events (Cont)

G1209	JPATS CAI	Canopy System	0.50	SYS2	
G1210	JPATS CAI	Ejection System	1.50	SYS2	
G1211	JPATS MIL	Systems Review 3	2.00	SYS2	
G1212	UTD	T-6A Cockpit Familiarization 2	1.50	SYS2	
G1213	CAI Test	SYS 2 Exam and Critique	2.00	SYS2	
G1301	JPATS MIL	Introduction to Operating Procedures/NATOPS	1.50	OPPROC	
G1302	JPATS MIL	Handling Emergency Procedures	1.00	OPPROC	(R
G1303	JPATS MIL	Takeoff Emergencies	1.50	OPPROC	
G1304	JPATS CAI	Exterior Inspection	1.00	OPPROC	
G1305	JPATS MIL	In-Flight Emergencies, Part 1	2.50	OPPROC	
G1306	JPATS MIL	In-Flight Emergencies, Part 2	3.00	OPPROC	
G1307	JPATS MIL	In-Flight Emergencies 3	2.00	OPPROC	(R
G1308	JPATS CAI	Postflight Checks	0.50	OPPROC	
G1309	JPATS CAI	Preflight Checks	1.50	OPPROC	
G1310	JPATS CAI	In-Flight Checks	1.00	OPPROC	
G1311	JPATS CAI	Aircraft Operating Limitations	2.00	OPPROC	
G1312	Offline MIL	PR/NATOPS Review	1.00	OPPROC	

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1. Events (Cont)

G1313	P/P	EP Test	1.50	OPPROC
G1314	CAI	PR/NATOPS Exam and Critique Test	2.00	OPPROC
C0101	MIL	T-6A Contact 1 - Flight Line Preparation	1.00	CONFP
C0102	MIL	T-6A Contact 2 - Ground Procedures	2.00	CONFP
C0103	MIL	T-6A Contact 3 - Course Rules/Area 1/MOA	2.00	CONFP
C0104	MIL	T-6A Contact 4 - Flight Procedures/Night Flight	1.50	CONFP
C0105	MIL	T-6A Contact 5 - Landing Pattern/EPs	2.00	CONFP

2. Syllabus Notes. The syllabus notes specify the prerequisites for the events in this block.

a. Complete G0102 and G0105 prior to G0201, G0202, G0204, G0301, G0401, G1003, G1004, G1101, and G1102.

b. Complete G0202 prior to G0203, G0301 prior to G0302, G1001 prior to G1002, G1002-4 prior to G1005, and G1005-7 in order.

c. Complete G1101 prior to G1001, G1103-5 (any order), G1107-11 (any order), G1201-2 (any order), G1204-5 (any order), and G1207-10 (any order).

d. Complete G1103-5 prior to G1106, G1106 prior to G1114, G1106-11 prior to G1112-13 (in order), G1201-2 prior to G1203, and G1204-5 prior to G1206.

e. Complete G1113 prior to G1211, G1206-10 prior to G1212, G1212 prior to G1213, G1213 prior to G1301, and G1301 prior to G1302-11 (in any order).

f. Complete G1302-11 prior to G1312 and C0101-5 (in any order); complete G1312 prior to G1314.

g. Complete G1302-7 prior to G1313 and C0101-5 prior to G0303.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C10	Class	Contact Flight Preparation	1	3.0	Contact

1. Events

C1001 Lect Contact Indoctrination 3.0
(FAM-0)

2. 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), 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% accuracy. Only minimal abbreviation will be acceptable. Less than 100% on the boldface and OPS limit exam shall be annotated on the grade sheet. (A)
(A)
(A)
(A)
(A)
(A)

3. Discuss Items

C1001

Flight line expectations, scheduling/snivels, chain of command, class advisor program, ATS, 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 2 above.

Block	Media	Title	Events	Hrs	Stage
G14-16/ I01	Class	Instrument Ground Training	96	133.5	See Below

1. Events

G1401	MIL	Introduction and Basic Instruments Overview		1.0	INST1
G1402	JPATS CAI	Instrument Displays and Cross-check		1.0	INST1
G1403	JPATS CAI	Introduction to Radio Instruments		1.5	INST1
G1404	JPATS CAI	FLIP, NOTAMs, and Charts		2.0	INST1
G1405	JPATS MIL	Basic Instrument Review		2.0	INST1
G1406	MIL	Intro to 2B47/TP-1 Brief		0.5	INST1
G1407	RIOT	RIOT 1 (Direct, RT, Course Intercept)		2.0	INST1
G1408	LECT	CR-2, Wind Analysis, and Time Gates		1.5	INST1
G1409	2B47	TP-1 Fly (Direct, RT, Course Intercept)		2.0	INST1
G1410	Lect	TP-1 Debrief/FLIP Homework		0.5	INST1
G1411	JPATS MIL	Advanced Instruments Overview		1.0	INST1
G1412	JPATS CAI	Instrument Takeoff and Departures		1.0	INST1
G1413	JPATS CAI	Arrival Preparation and Holding		1.0	INST1
G1414	JPATS MIL	Instruments Review 1		2.0	INST1
G1415	MIL	Holding Lecture (6Ts)/ Holding Trainer		1.5	INST1
G1416	RIOT	RIOT 2 (PTP, Holding)		1.5	INST1

Continued on next page.

1. Events (Cont)

G1417	2B47	TP-2 FLY (Direct, PTP, Course Intercept, Arc)	1.5	INST1
G1418	Lect	TP-2 Grading/Debrief and AIM Chapter 5 (Holding)	0.5	INST1
G1419	Lect	FLIP Review and CR-2 Exercises	1.5	INST1
G1420	RIOT	RIOT 3 (SID, Enroute, Wind Analysis, GS, ETA, Holding)	1.5	INST1
G1421	Lect	TP-3 Brief	0.5	INST1
G1422	2B47	TP-3 Fly (Holding)	2.0	INST1
G1423	Lect	TP-3 Grading/Debrief and Homework	1.0	INST1
G1424	Lect	Instruments 1 Examination Review	1.5	INST1
G1425	CAI Test	Instruments 1 Exam	1.5	INST1
G1426	Lect	Instruments 1 Exam Remediation, Review, and Critique	1.0	INST1
G1501	JPATS CAI	Descent and Penetration	1.0	INST2
G1502	JPATS CAI	Low Altitude Approaches	1.0	INST2
G1503	JPATS MIL	Instruments Review 2	2.0	INST2
G1504	JPATS CAI	Final Approach	1.5	INST2
G1505	JPATS CAI	Radar Approaches	1.5	INST2
G1506	JPATS CAI	Transition to Landing and Missed Approach	2.0	INST2
G1507	JPATS MIL	Instruments Review 3	2.0	INST2

Continued on next page.

1. Events (Cont)

G1508	Lect	Homework-INAV Supplement and Comms	2.0	INST2
G1509	JPATS MIL	Instruments Review 4	2.0	INST2
G1510	Lect	Comm Brief and Radar Pattern	1.5	INST2
G1511	Lect	TP-4 Brief/RIOT Examples	0.5	INST2
G1512	Offline MIL	Instruments 2 Examination Review	1.5	INST2
G1513	None	Tower, GCA Visit	2.0	INST2
G1514	CAI Test	Instruments 2 Exam	1.5	INST2
G1515	Lect	Instruments 2 Exam Review, Remediation, and Critique	1.5	INST2
G1516	2B47	TP-4 Fly (PTP)	2.0	INST2
G1517	Lect	TP-4 Grading/Debrief	1.0	INST2
G1518	Lect	TP-5 Brief/TP-6 Brief	1.5	INST2
G1519	2B47	TP-5 Fly (CBM-DHN/SID, RT, PTP, Arc, Holding)	2.0	INST2
G1520	Lect	TP-5 (Grading/Debrief)	1.5	INST2
G1521	2B47	TP-6 Fly (CBM-NQA/SID, RT, PTP, Arc)	2.5	INST2
G1522	Lect	TP-6 Grading/Debrief	1.5	INST2
G1523	Lect	TP-7 Brief	0.5	INST2
G1524	2B47	TP-7 Fly (CBM-NBG/Practical Final)	2.5	INST2
G1525	Lect	TP-7 Grading/Debrief and Course Critiques	1.0	INST2
G1526	Lect	INAV Supplement Review	1.5	INST2
G1527	Lect	TP-7 Remedial	1.5	INST2
G1528	Lect	TP-7 Remedial Grading/Debrief and FLIP Homework	0.5	INST2

Continued on next page.

1. Events (Cont)

G1601	MIL	Flight Planning Introduction and Overview	0.5	FltPlng
G1602	MIL	Weather Requirements	1.0	FltPlng
G1603	MIL	DD 175	0.5	FltPlng
G1604	MIL	Jet Logs	1.0	FltPlng
G1605	MIL	INAV Turnpoint Procedures	1.0	FltPlng
G1606	Lect	TP-8 Brief	0.5	FltPlng
G1607	JPATS MIL	IFR Navigation	2.0	FltPlng
G1608	2B47	TP-8 (NPA-MGM)	3.5	FltPlng
G1609	Lect	TP-8 Debrief	1.0	FltPlng
G1610	Lect	TP-8 Procedures Review/ Chairfly	1.5	FltPlng
G1611	Lect	Day 1 Homework Review	1.0	FltPlng
G1612	Lect	TP-8 Refly Brief/TP-9 Brief	0.5	FltPlng
G1613	2B47	TP-8 Refly (NPA-MGM)	2.5	FltPlng
G1614	Lect	TP-8 Refly Debrief	1.0	FltPlng
G1615	2B47	TP-9 (MGM - CBM)	2.0	FltPlng
G1616	Lect	TP-9 Debrief	1.0	FltPlng
G1617	Lect	Day 2 Homework Review	1.0	FltPlng
G1618	Lect	TP-10 Brief	0.5	FltPlng
G1619	2B47	TP-10 (CBM-NPA)	2.5	FltPlng
G1620	Lect	TP-10 Debrief	1.0	FltPlng
G1621	Lect	Day 3 Homework Review	1.0	FltPlng
G1622	Lect	TP-11 Brief	0.5	FltPlng
G1623	2B47	TP-10 Refly (CBM-NPA)	2.0	FltPlng
G1624	Lect	TP-10 Refly Debrief	1.0	FltPlng
G1625	2B47	TP-11 (NPA-NPA)	2.5	FltPlng
G1626	Lect	TP-11 Debrief	1.0	FltPlng

Continued on next page.

1. Events (Cont)

G1627	Lect	Day 4 Homework Review	1.0	FltPlng
G1628	Lect	TP-12 Brief	0.5	FltPlng
G1629	2B47	TP-11 Refly (CBM-NPA)	2.0	FltPlng
G1630	Lect	TP-11 Refly Debrief	1.0	FltPlng
G1631	2B47	TP-12 (NPA-NPA)	2.5	FltPlng
G1632	Lect	TP-12 Debrief	1.0	FltPlng
G1633	Lect	Flight Planning Homework Review	0.5	FltPlng
G1634	MIL	Flight Line Preparation Lecture	0.5	FltPlng
G1635	MIL	Flight Planning Exam Review	0.5	FltPlng
G1636	Lect	TP-13 Practical Exam Brief	0.5	FltPlng
G1637	2B47	TP-12 Refly (CBM-NPA)	2.0	FltPlng
G1638	Lect	TP-12 Refly Debrief	1.0	FltPlng
G1639	CAI	Flight Planning Exam Test	1.5	FltPlng
G1640	2B47	TP-13 Practical Final Exam	1.5	FltPlng
G1641	Lect	Flight Planning Exam Review, Remediation, and Critique	1.0	FltPlng
I0101	MIL	Instrument Navigation Flight Preparation	5.5	FltPrep

2. Syllabus Notes. The syllabus notes specify the prerequisites for the events in this block.

- R)
- a. Complete C4290 prior to G1401.
 - b. Complete G1402-5, G1408, G1411-15, G1419, G1424-26, G1501-10, and G1512, in any order after G1401 and prior to G1514.
 - c. Complete G1514 prior to G1515.
 - d. Complete G1401 prior to G1407, G1407 prior to G1416, and G1416 prior to G1420.

e. Complete G1401 prior to G1406, G1406 prior to G1409-10 (in order). TP blocks (Brief, Fly, Debrief) are completed in numerical order with TP-1 debrief being prerequisite for TP-2 brief, TP-2 brief prerequisite for TP-2 Fly event, TP-2 Debrief prerequisite for TP-2 Brief, etc. G1525 is prerequisite for G1527-28.

f. Complete G1401 prior to G1512 and G1526.

g. Complete G1515, G1420, G1528, and G1526 prior to G1601.

h. Complete G1602-5 and G1607 in any order after G1601 and prior to G1635.

i. Complete G1635 prior to G1639.

j. Complete G1639 prior to G1641.

k. Complete G1601 prior to G1606, G1606 prior to G1608, G1609 prior to G1610, G1610 prior to G1612-16, G1616 prior to G1618-20, G1620 prior to G1622-26, G1626 prior to G1628-32, G1632 prior G1636-38, G1638 prior to G1640.

l. Complete G1601 prior to G1634 and G1611.

m. Complete G1611 prior to G1617, G1617 prior to G1621, G1621 prior to G1627, G1627 prior to G1633.

n. Complete G1641, G1640, G1634, and G1633 prior to I0101.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
N01/ F01	Class/ SS	Intermediate Flight Support	5	22.0	See Below

1. Events

N0101	MIL	Chart Review/Prep		2.0	VNAVFP
N0102	MIL	Low-level Flight Planning		2.0	VNAVFP
N0103	MIL	Flight Procedures		3.0	VNAVFP
N0104	SS	Chart Prep Time		12.0	VNAVFP
F0101	MIL	Formation Preparation and Flight Procedures		3.0	FORMFP

2. Syllabus Notes

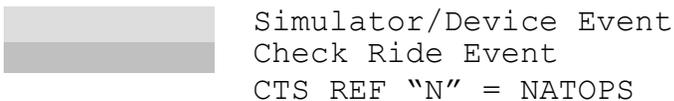
- a. Complete N0101-4 in order after Primary phase (I4490).
- b. Complete I4490 prior to N0101.
- c. Complete N0104 prior to F0101.

3. Discuss Items. None.

Chapter III

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+

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	C2003	C4004	C4101	C4290
N	Strap-In/Interior Inspection	3+			
7	Ground Procedures		4+	2+	4+
8	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+			
9	Takeoff		4+	1	4+
10	Departure		4+	2	4+
N	After Takeoff/Climb Checklists	3+			
N	Operations Check	3+			
11	Use of Controls/Trim		4+	2+	4+
12	In-Flight Checks		4+	4+	4+
13	In-Flight Planning/Area Orientation		4+	2	4+
14	Basic Transitions		4+	2	4+
15	VFR Scan		4+	3	4+
16	LSC		4+	2	
17	Turn Pattern		4+	2	4
18	POS		4+		4
19	ATS		4+		4+
20	Spin		3+		3+
22	Simulated Power Loss		3+		3+

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	C2003	C4004	C4101	C4290
23	PPEL		3+	2	3
N	Descent/Before Landing Checklists	3+			
24	Landing Pattern		4+	2	4+
25	Landings		2+	2	2
26	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+			
N	Use of Canopy Fracturing System	3+			
27	Course Rules/HFE		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	PEL	3+			
	Special Syllabus Requirements		1		1

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

1. Prerequisites. Preflight Ground Training.

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, communication procedures.

C2002

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

C2003

Ejection and the ejection decision, PMU, generator/battery bus inoperative, flight line expectations, 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+
8	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+

MIF continued on next page.

CTS REF	MANEUVER	C2003
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
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	PEL	3+

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

1. Prerequisites

- a. C2003.
- b. C1001 (Contact Indoctrination).

2. Syllabus Note. The purpose of this block is to motivate the student for the T-6A phase of training and to 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 emergency procedure, and any limitation.

C4003

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

C4004

Fuel system failures, OBOGS inoperative, inadvertent departure from controlled flight, review contact maneuver procedures, any emergency procedure, 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+
7	Ground Procedures	4+
8	Radio Procedures	4+
9	Takeoff	4+
10	Departure	4+
11	Use of Controls/Trim	4+
12	In-Flight Checks	4+
13	In-Flight Planning/Area Orientation	4+
14	Basic Transitions	4+
15	VFR Scan	4+
16	LSC	4+
17	Turn Pattern	4+
18	POS	4+
19	ATS	4+
20	Spin	3+
22	Simulated Power Loss	3+
23	PPEL	3+
24	Landing Pattern	4+
25	Landings	2+
26	Go Around/Waveoff	3+
27	Course Rules/HFE	4+
	Special Syllabus Requirements	1

Block	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

C4101

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+
7	Ground Procedures	2+
8	Radio Procedures	3+
9	Takeoff	1
10	Departure	2
11	Use of Controls/Trim	2+
12	In-Flight Checks	4+
13	In-Flight Planning/Area Orientation	2
14	Basic Transitions	2
15	VFR Scan	3
16	LSC	2
17	Turn Pattern	2
23	PPEL	2
24	Landing Pattern	2
25	Landings	2
26	Go Around/Waveoff	2
27	Course Rules/HFE	2

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

1. Prerequisite. C4004.
2. Syllabus Note. Aerobatics will be a demonstration item only. SNFO/SCSO will be responsible for briefing the maneuver set-up parameters.
3. Special Syllabus Requirement. Precision aerobatics/AGSM.
4. Discuss Items
C4290
Precision aerobatics, any previously discussed items, any emergency procedure, any limitation.

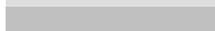
5. Block MIF

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

Chapter IV

Instrument Training

1. Seating. Students shall occupy the rear cockpit during this stage.
2. Matrices. The following matrix is an overview of the Primary Instrument 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. Primary Stage MIF

 Simulator/Device Event
 Check Ride Event

PRIMARY INSTRUMENT STAGE MANEUVER ITEM FILE							
CTS REF	MANEUVER	I2009	I4005	I4190	I4204	I4304	I4490
1	General Knowledge/ Procedures	4+	4+	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	3+	3+	3+	3+	4+	4+
4	BAR	4+	4+	4+	4+	4+	4+
5	Mission Planning	3+	3+	3+	4+	4+	4+
6	NFO/CSO Responsibilities	4+	4+	4+	4+	4+	4+
8	Radio Procedures	3+	3+	3+	4+	4+	4+
10	Departure	4+	4+	4+	4+	4+	4+
28	Use of ATIS/PMSV/FSS	3+	3+	3+	4+	4+	4+
29	In-Flight Computations	4+	4+	4+	4+	4+	4+
30	Crew Resource Management	3+	3+	3+	3+	4+	4+
31	In-Flight Briefings	4+	4+	4+	4+	4+	4+
32	Direct to VOR	4+	4+	4+	4+	4+	4+
33	Enroute Procedures	4+	4+	4+	4+	4+	4+
34	Point-to-Point	3+	3+	3+	3+	4+	4+
35	Arcing	3+	4+	4	4+	4+	4

MIF continued on next page.

PRIMARY INSTRUMENT STAGE MANEUVER ITEM FILE							
CTS REF	MANEUVER	I2009	I4005	I4190	I4204	I4304	I4490
36	Station/Waypoint Passage	4+	4+	4+	4+	4+	4+
37	Holding (VOR)	3+	3+	3	4+	4+	4
38	Holding (GPS)	3+	1	1	3	4	4
39	VOR Approach	3+	3+	3	4+	4+	4
40	GPS Approach	3+	1	1	3	4	4
41	Localizer Approach	3+	3	3	4	4+	4
42	ILS Approach	3+	3+	3	3+	4+	4
43	Circling Approach	3	3	3	4	4+	4
44	RA/GCA	3+	3+	3	4+	4+	4
45	Missed Approach	3+	3+	3+	4+	4+	4+
46	Visual Glideslope Interpretation	3	4+	4	4	4+	4
47	Instrument Turnpoint Procedures	3+	3+	3+	4+	4+	4+
	Special Syllabus Requirements		1				

Block	Media	Title	Events	Hrs	H/X
I20	UTD/OFT	Instrument Navigation	9	13.5	1.5

1. Prerequisites

- a. C4290.
- b. Instrument Ground Training.

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

I2001

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

I2002

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

I2003

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

I2004

VOR holding, VOR approach procedures, intercept techniques, any emergency procedure, and any instrument navigation procedure.

I2005

GPS procedures.

I2006

High Altitude Airways Structure, VOR approach procedures, pilot's discretion descent, and lost communications.

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I2007

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

I2008

Departure procedure, localizer approach procedures, and localizer backcourse approach.

I2009

Radar approach procedures, STARs, and unusual attitudes/vertigo.

5. Block MIF

CTS REF	MANEUVER	I2009
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Mission Planning	3+
6	NFO/CSO Responsibilities	4+
8	Radio Procedures	3+
10	Departure	4+
28	Use of ATIS/PMSV/FSS	3+
29	In-Flight Computations	4+
30	Crew Resource Management	3+
31	In-Flight Briefings	4+
32	Direct to VOR	4+
33	Enroute Procedures	4+
34	Point-to-Point	3+
35	Arcing	3+
36	Station/Waypoint Passage	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	Visual Glideslope Interpretation	3
47	Instrument Turnpoint Procedures	3+

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

1. Prerequisite. I2009.

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, VOR approach, 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	Mission Planning	3+
6	NFO/CSO Responsibilities	4+
8	Radio Procedures	3+
10	Departure	4+
28	Use of ATIS/PMSV/FSS	3+
29	In-Flight Computations	4+
30	Crew Resource Management	3+
31	In-Flight Briefings	4+
32	Direct to VOR	4+
33	Enroute Procedures	4+
34	Point-to-Point	3+
35	Arcing	4+
36	Station/Waypoint Passage	4+
37	Holding (VOR)	3+
38	Holding (GPS)	1
39	VOR Approach	3+
40	GPS Approach	1
41	Localizer Approach	3
42	ILS Approach	3+
43	Circling Approach	3
44	RA/GCA	3+
45	Missed Approach	3+
46	Visual Glideslope Interpretation	4+
47	Instrument Turnpoint Procedures	3+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
I41	T-6A	Instrument Navigation 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 to include a VOR or ILS and GCA (if available).

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

I4190

Any emergency procedure, 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	Mission Planning	3+
6	NFO/CSO Responsibilities	4+
8	Radio Procedures	3+
10	Departure	4+
28	Use of ATIS/PMSV/FSS	3+
29	In-Flight Computations	4+
30	Crew Resource Management	3+
31	In-Flight Briefings	4+
32	Direct to VOR	4+
33	Enroute Procedures	4+
34	Point-to-Point	3+
35	Arcing	4
36	Station/Waypoint Passage	4+
37	Holding (VOR)	3
38	Holding (GPS)	1
39	VOR Approach	3
40	GPS Approach	1
41	Localizer Approach	3
42	ILS Approach	3
43	Circling Approach	3
44	RA/GCA	3
45	Missed Approach	3+
46	Visual Glideslope Interpretation	4
47	Instrument Turnpoint Procedures	3+

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

1. Prerequisite. I4190.

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.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4201

Smoke and fume elimination/electrical fire, chip detector warning, visual glideslope indicators and interpretation, OPNAVINST 3710.7T alternate field requirements.

I4202

Avionics failures and OPNAVINST 3710.7T fuel requirements.

I4203

OBOGS system and failures, and OPNAVINST 3710.7T takeoff minimums.

I4204

Any emergency procedure and any limitation.

5. Block MIF

CTS REF	MANEUVER	I4204
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Mission Planning	4+
6	NFO/CSO Responsibilities	4+
8	Radio Procedures	4+
10	Departure	4+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	4+
30	Crew Resource Management	3+
31	In-Flight Briefings	4+
32	Direct to VOR	4+
33	Enroute Procedures	4+
34	Point-to-Point	3+
35	Arcing	4+
36	Station/Waypoint Passage	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	Visual Glideslope Interpretation	4
47	Instrument Turnpoint Procedures	4+

Block	Media	Title	Events	Hrs	H/X
I43	T-6A	Instrument Navigation	4	8.0	2.0

1. Prerequisite. I4204.

2. Syllabus Notes

a. Flights should be flown as out-and-in or cross-country events.

b. Students should 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

I4301

Approach lighting systems, localizer approaches, operations away from home field, and any emergency procedure.

I4302

Icing, position reports, circling maneuvers, and any emergency procedure.

I4303 - I4304

Any emergency procedure and any limitation.

5. Block MIF

CTS REF	MANEUVER	I4304
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	BAR	4+
5	Mission Planning	4+
6	NFO/CSO Responsibilities	4+
8	Radio Procedures	4+
10	Departure	4+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	4+
30	Crew Resource Management	4+
31	In-Flight Briefings	4+
32	Direct to VOR	4+
33	Enroute Procedures	4+
34	Point-to-Point	4+
35	Arcing	4+
36	Station/Waypoint Passage	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	Visual Glideslope Interpretation	4+
47	Instrument Turnpoint Procedures	4+

Block	Media	Title	Events	Hrs	H/X
I44	T-6A	Instrument Navigation Check Ride II	1	2.0	2.0

1. Prerequisite. I4304.

2. Syllabus Notes

a. Flight should be flown as out-and-in or cross-country events.

b. A minimum of two approaches shall be performed to include a VOR or ILS and GPS.

c. 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

I4490

Any emergency procedure and any limitation.

5. Block MIF

CTS REF	MANEUVER	I4490
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	BAR	4+
5	Mission Planning	4+
6	NFO/CSO Responsibilities	4+
8	Radio Procedures	4+
10	Departure	4+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	4+
30	Crew Resource Management	4+
31	In-Flight Briefings	4+
32	Direct to VOR	4+
33	Enroute Procedures	4+
34	Point-to-Point	4+
35	Arcing	4
36	Station/Waypoint Passage	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	Visual Glideslope Interpretation	4
47	Instrument Turnpoint Procedures	4+

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Chapter V

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 Event
 Check Ride Event

NAVIGATION STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	N3002	N5005	N5190
1	General Knowledge/Procedures	4+	4+	4+
2	Emergency Procedures	4+	4+	4+
3	Headwork/Situational Awareness	2+	3+	3+
4	BAR	4+	4+	4+
5	Mission Planning	3+	4+	4+
6	NFO/CSO Responsibilities	4+	4+	4+
7	Ground Procedures	3+	4+	4+
8	Radio Procedures	4+	4+	4+
10	Departure	3+	4+	4+
15	VFR Scan	3+	4+	4+
28	Use of ATIS/PMSV/FSS	4+	4+	4+
29	In-Flight Computations	4+	4+	4+
30	Crew Resource Management	3+	4+	4+
39	VOR Approach	4	4	4
40	GPS Approach	4	4	4
41	Localizer Approach	4	4	4
42	ILS Approach	4	4	4

MIF continued on next page.

NAVIGATION STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	N3002	N5005	N5190
43	Circling Approach	4	4	4
44	RA/GCA	4	4	4
46	Visual Glideslope Interpretation	4	4	4
47	Instrument Turnpoint Procedures	4	4	4
48	VNAV Chart	3+	4+	4+
49	Turnpoint Identification	2+	4+	4+
50	VNAV Turnpoint Procedures	3+	4+	4+
51	Intermediate Checkpoint Identification	2+	4+	4+
52	Hazard Calls	3+	4+	4+
53	Standard Time Corrections	2+	4+	4+
54	Standard Course Corrections	2+	4+	4+
55	Altitude Selection/Compliance	3+	4+	4+
56	Fuel Management/Analysis	3+	4+	4+
57	Wind Consideration		4+	4+

Block	Media	Title	Events	Hrs	H/X
N30	OFT	Day Visual Navigation	2	3.0	1.5

1. Prerequisite. N01 block (Visual Navigation Flight Procedures).

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/SCSO understands course training standards; simulator wind analysis limitations; event OFT configuration settings; ground speed and ground track compensations; time and course corrections; turnpoint procedures; fix, correct, and assess process; and 6-minute rule.

N3002

VFR chart interpretation/symbology, differences in IFR/VFR clearances, low-level emergency procedures, mission cross-check time, terrain clearance tasks, mission tasks, critical tasks, and noncritical tasks.

5. Block MIF

CTS Ref	MANEUVER	N3002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	2+
4	BAR	4+
5	Mission Planning	3+
6	NFO/CSO Responsibilities	4+
7	Ground Procedures	3+
8	Radio Procedures	4+
10	Departure	3+
15	VFR Scan	3+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	4+
30	Crew Resource Management	3+
39	VOR Approach	4
40	GPS Approach	4
41	Localizer Approach	4
42	ILS Approach	4
43	Circling Approach	4
44	RA/GCA	4
46	Visual Glideslope Interpretation	4
47	Instrument Turnpoint Procedures	4
48	VNAV Chart	3+
49	Turnpoint Identification	2+
50	VNAV Turnpoint Procedures	3+
51	Intermediate Checkpoint Identification	2+
52	Hazard Calls	3+
53	Standard Time Corrections	2+
54	Standard Course Corrections	2+
55	Altitude Selection/Compliance	3+
56	Fuel Management/Analysis	3+

Block	Media	Title	Events	Hrs	H/X
N50	T-6A	Day Visual Navigation	5	10.0	2.0

1. Prerequisite. N3002.
2. Syllabus Notes
 - a. VFR between 1000 and 3000 feet AGL.
 - 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
 - N5001
VFR chart interpretation/symbology, emergency field selection, lost aircraft procedures, VFR field entry/departure, airspace classification, wind analysis/wind consideration, and any EP.
 - N5002
Off-station operations and maintenance, navigation from home field to Pt A, VFR flight following, IFR clearance, low-level emergency procedures, low-level ejection, bird strike, Area 2F Transit Procedures, and wind analysis/wind consideration.
 - N5003
Any EP and review VNAV procedures.
 - N5004
Any EP and review VNAV procedures.
 - N5005
Any EP and review VNAV procedures.

5. Block MIF

CTS Ref	MANEUVER	N5005
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Mission Planning	4+
6	NFO/CSO Responsibilities	4+
7	Ground Procedures	4+
8	Radio Procedures	4+
10	Departure	4+
15	VFR Scan	4+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	4+
30	Crew Resource Management	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
46	Visual Glideslope Interpretation	4
47	Instrument Turnpoint Procedures	4
48	VNAV Chart	4+
49	Turnpoint Identification	4+
50	VNAV Turnpoint Procedures	4+
51	Intermediate Checkpoint Identification	4+
52	Hazard Calls	4+
53	Standard Time Corrections	4+
54	Standard Course Corrections	4+
55	Altitude Selection/Compliance	4+
56	Fuel Management/Analysis	4+
57	Wind Consideration	4+

Block	Media	Title	Events	Hrs	H/X
N51	T-6A	Visual Navigation Check Ride	1	2.0	2.0

1. Prerequisites

a. N5005.

2. Syllabus Notes

a. VNAV low-level route required.

b. A minimum of two approaches.

3. Special Syllabus Requirements. None.

4. Discuss Items

N5190

Lost communications (FIH), OPNAV takeoff/approach minimums, alternate minimums, VFR minimums/cloud clearances, flight planning (submit a completed DD 175 and flight log), fuel minimums (SOP versus OPNAVINST 3710.7 series), VFR flight following versus IFR clearance, VNAV procedures, any system, any EP, military training route structure, AP/1B resources for Formation Low-Level event.

5. Block MIF

CTS Ref	MANEUVER	N5190
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
5	Mission Planning	4+
6	NFO/CSO Responsibilities	4+
7	Ground Procedures	4+
8	Radio Procedures	4+
10	Departure	4+
15	VFR Scan	4+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	4+
30	Crew Resource Management	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
46	Visual Glideslope Interpretation	4
47	Instrument Turnpoint Procedures	4
48	VNAV Chart	4+
49	Turnpoint Identification	4+
50	VNAV Turnpoint Procedures	4+
51	Intermediate Checkpoint Identification	4+
52	Hazard Calls	4+
53	Standard Time Corrections	4+
54	Standard Course Corrections	4+
55	Altitude Selection/Compliance	4+
56	Fuel Management/Analysis	4+
57	Wind Consideration	4+

Chapter VI

Formation Training

1. Seating. Student shall occupy the rear cockpit during this stage.
2. Matrices. The following matrix is an overview of the entire Formation 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

FORMATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	F5002	F5102
1	General Knowledge/Procedures	3+	4+
2	Emergency Procedures	3+	4+
3	Headwork/Situational Awareness	3+	3+
4	BAR	4+	4+
6	NFO/CSO Responsibilities	3+	4+
7	Ground Procedures	3+	4+
8	Radio Procedures	3+	3+
10	Departure	4+	4+
12	In-Flight Checks	4+	4+
21	AGSM	4+	4+
27	Course Rules/HFE	3	3+
28	Use of ATIS/PMSV/FSS	4+	4+
29	In-Flight Computations		3+
48	VNAV Chart		3+
49	Turnpoint Identification		3+
50	VNAV Turnpoint Procedures		3+
52	Hazard Calls		3+
58	Taxi and Marshal	3+	3+
59	Formation Takeoff	3+	3+
60	Crew Coordination Communications	3+	3+

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	F5002	F5102
61	Wingman Communication	3+	3+
62	In-Flight Planning/Area Management	3+	3+
63	Fuel Management	4+	4+
64	Enroute Formation	3+	3+
65	Parade Position	3+	4
66	Parade Sequence	3+	
67	Breakup and Rendezvous	4+	
68	Underrun	3+	3
69	Lead Change	3+	3
70	Lost Wingman	3+	3
71	Cruise Position	3+	4
72	Tail-Chase	3+	
73	Tactical Spread	3+	3+
74	Rejoin	3+	4+
75	VFR Arrival	3	3
76	Formation Approach	3+	3

Block	Media	Title	Events	Hrs	H/X
F50	T-6A	Formation	2	3.5	
			F5001		1.5
			F5002		2.0

1. Prerequisite

- a. F0101 (Formation Preparation and Procedures).
- b. N5003.

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items

F5001

Lead/wing responsibilities; NORDO; HEFOE visual signals; formation procedures and positions; airborne damaged plane.

F5002

Formation instrument approaches, visual lookout doctrine, TacForm procedures, etc.

5. Block MIF

CTS REF	MANEUVER	F5002
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	BAR	4+
6	NFO/CSO Responsibilities	3+
7	Ground Procedures	3+
8	Radio Procedures	3+
10	Departure	4+
12	In-Flight Checks	4+
21	AGSM	4+
27	Course Rules/HFE	3
28	Use of ATIS/PMSV/FSS	4+
58	Taxi and Marshal	3+
59	Formation Takeoff	3+
60	Crew Coordination Communications	3+
61	Wingman Communication	3+
62	In-Flight Planning/Area Management	3+
63	Fuel Management	4+
64	Enroute Formation	3+
65	Parade Position	3+
66	Parade Sequence	3+
67	Breakup and Rendezvous	4+
68	Underrun	3+
69	Lead Change	3+
70	Lost Wingman	3+
71	Cruise Position	3+
72	Tail-Chase	3+
73	Tactical Spread	3+
74	Rejoin	3+
75	VFR Arrival	3
76	Formation Approach	3+

Block	Media	Title	Events	Hrs	H/X
F51	T-6A	Formation Navigation	2	4.0	2.0

1. Prerequisite. F5002.
2. Syllabus Notes. None.
3. Special Syllabus Requirements. None.
4. Discuss Items. Two-ship navigation procedures.

5. Block MIF

CTS REF	MANEUVER	F5102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	BAR	4+
6	NFO/CSO Responsibilities	4+
7	Ground Procedures	4+
8	Radio Procedures	3+
10	Departure	4+
12	In-Flight Checks	4+
21	AGSM	4+
27	Course Rules/HFE	3+
28	Use of ATIS/PMSV/FSS	4+
29	In-Flight Computations	3+
48	VNAV Chart	3+
49	Turnpoint Identification	3+
50	VNAV Turnpoint Procedures	3+
52	Hazard Calls	3+
58	Taxi and Marshal	3+
59	Formation Takeoff	3+
60	Crew Coordination Communications	3+
61	Wingman Communication	3+
62	In-Flight Planning/Area Management	3+
63	Fuel Management	4+
64	Enroute Formation	3+
65	Parade Position	4
68	Underrun	3
69	Lead Change	3
70	Lost Wingman	3
71	Cruise Position	4
73	Tactical Spread	3+
74	Rejoin	4+
75	VFR Arrival	3
76	Formation Approach	3

Chapter VII

Tactical Training

This chapter does not apply to the MNTS Primary and Intermediate phases of training.

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Chapter VIII

Course Training Standards

1. Purpose. These standards outline the tasks and proficiency required of student Naval Flight Officers/USAF Weapons System Officers during the primary and intermediate 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 visual meteorological condition (VMC) maneuvers in conjunction with visual clearing.
- b. Unless otherwise specified, use **BASIC AIR WORK RECOGNITION (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 maneuver item file (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/SCSO..."

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. Then beginning with Contact, each stage's MIF table is listed followed by the course training standards which are introduced in that stage. Some of the standards are unique to that stage, while other may apply to later stages. Once the standard for a graded item has been established, it will not be repeated in the CTS list of later stages, but remains available to be graded.

7. Course Training Standards

UNIVERSALLY GRADED ITEMS

BEHAVIOR STATEMENT	STANDARDS
1. General Knowledge/Procedures	
<ul style="list-style-type: none"> ● Maintain working knowledge of all appropriate flight training instructions and directives. 	<ul style="list-style-type: none"> ● Recites, discusses, and/or performs all applicable items essential to the operation of the airplane.
2. Emergency Procedures	
<ul style="list-style-type: none"> ● Maintain in-depth knowledge of all NATOPS emergency procedures. ● Utilize the PCL as required by the NATOPS and FTI. 	<ul style="list-style-type: none"> ● Correctly analyzes situation given real or hypothetical situations. ● Performs/recites critical action steps from memory without error. ● Uses checklist to complete procedures when conditions permit. ● Is familiar with all information contained in the PCL, is able to access that information in a correct and timely manner.
3. Headwork/Situational Awareness	
<ul style="list-style-type: none"> ● Comply with the FTI and NATOPS while maintaining situational awareness sufficient for flight safety. 	<ul style="list-style-type: none"> ● Understands instructions, demonstrations, and explanations. ● Foresees and avoids possible difficulties and makes recommendations for the situation. ● Remains alert and spatially oriented. ● Maintains overall awareness with regard to fuel state, aircraft configuration, nearby traffic, and weather.

4. Basic Air Work Recognition (BAR)	
<ul style="list-style-type: none"> ● Establish and maintain (or recognize and direct) desired altitude, airspeed, and heading during flight. 	<ul style="list-style-type: none"> ● Makes recommendations to: <ul style="list-style-type: none"> ▶ Maintain aircraft within 100 feet, 10 KIAS, 5° of heading. ▶ Appropriately use power, attitude, and trim. ▶ Level off within 100 feet of desired altitude. ▶ Accomplish within ±10 seconds of correct time as applicable.
5. Mission Planning	
<ul style="list-style-type: none"> ● Perform mission planning to include takeoff, climb, enroute, descent, approach, and landing data. ● Plan alternate course of action. ● Prepare Flight Log/DD 175. 	<ul style="list-style-type: none"> ● Uses required directives and forms. ● Plans mission in a timely manner to meet requirements. ● Completes all forms correctly. ● Complies with all directives. ● Has all required materials (Wx brief, FLIP publications, NOTAMS, low-level chart as required) prior to brief.

CONTACT

These Contact standards call for an action to be accomplished in a safe and proper manner. If the SNFO/SCSO is at the controls at the time of the action, steps need not be verbalized to meet or exceed standards. If the IP is at the controls, the SNFO/SCSO will verbally direct the pilot in a timely and procedurally correct manner to accomplish the action(s). If the instructor deems the verbal direction sequentially correct and accurate to the situation/maneuver, the SNFO/SCSO may meet or, in some cases, exceed the training standard.

BEHAVIOR STATEMENT	STANDARDS
6. NFO/CSO Responsibilities	
<ul style="list-style-type: none"> ● Accomplish required in-flight duties. 	<ul style="list-style-type: none"> ● Makes recommendations to maintain proper aircraft flight parameters. ● Performs proper aircraft operations checklists IAW FTI and NATOPS. ● Gives takeoff calls, altitude warning calls and landing rollout calls.

BEHAVIOR STATEMENT	STANDARDS
7. Ground Procedures	
<ul style="list-style-type: none"> ● Prepare aircraft for flight. 	<ul style="list-style-type: none"> ● Correctly and efficiently performs exterior/interior inspections per NATOPS. ● Safely directs the taxi of the aircraft from the parking area to the runway via local procedures, using applicable airfield diagram as a reference. ● Visually clears the aircraft at every intersection or possible obstruction. ● Performs a postflight exterior inspection.
8. Radio Procedures	
<ul style="list-style-type: none"> ● Communicates via two-way UHF/VHF radio using standard terminology. 	<ul style="list-style-type: none"> ● Understands and responds to 90 percent of incoming calls. ● Makes all calls when required, using standard FAA military terminology during ground operations, departure, enroute, and arrival. ● Makes timely transmissions without stepping on others. ● Exercises communications brevity consistent with FAA and voice communications FTI requirements.
9. Takeoff	
<ul style="list-style-type: none"> ● Perform takeoff, starting with clearance for takeoff and ending with landing gear retraction. 	<ul style="list-style-type: none"> ● Completes the takeoff checklist. ● Adequately checks engine instruments. ● Safely raises gear, and verbally reports subsequent gear indication.
10. Departure	
<ul style="list-style-type: none"> ● Perform proper VFR or IFR departure procedures. 	<ul style="list-style-type: none"> ● Complies with departure procedures and ATC instructions. ● Maintains IFR course $\pm 5^\circ$. ● Performs an operations checklist at or before level off.

BEHAVIOR STATEMENT	STANDARDS
11. Use of Controls/Trim	
<ul style="list-style-type: none"> ● Manipulate the three primary flight controls. ● Properly trim the aircraft. 	<ul style="list-style-type: none"> ● Understands flight control movements and resulting action in all three primary axes. ● Recognizes balanced flight. ● Trims all three primary flight controls in the appropriate direction.
12. In-Flight Checks	
<ul style="list-style-type: none"> ● Complete checks as required. 	<ul style="list-style-type: none"> ● Performs: <ul style="list-style-type: none"> ▶ Instrument, fuel, ops checks, as required by FTI/NATOPS/SOP. ▶ Landing checklist as required by FTI/NATOPS. ▶ Stall/pre-aerobatic checklist as required by FTI/NATOPS.
13. In-Flight Planning/Area Orientation	
<ul style="list-style-type: none"> ● Visually navigate and remain within prescribed working area. 	<ul style="list-style-type: none"> ● Identifies nearest suitable landing field. ● Adjusts mission profile for external factors (weather, traffic, etc.). ● Maintains positional awareness using ground references, navigational aids, VFR charts, or FLIP publications. ● Maintains appropriate boundaries and altitude block within a working area as required.
14. Basic Transitions	
<ul style="list-style-type: none"> ● Properly climb, descend, and level off. 	<ul style="list-style-type: none"> ● Initiates level off at the correct altitude, using PAT principle. ● Performs clearing turns for climb and descents greater than 1000 feet, as appropriate.
15. VFR Scan	
<ul style="list-style-type: none"> ● Maintain aircraft control relying primarily on outside references. ● Clear for other aircraft and weather. 	<ul style="list-style-type: none"> ● Recognizes appropriate VFR nose attitudes for defined configurations (i.e., normal/fast cruise). ● Communicates traffic and weather conflicts and initiates proper response.

BEHAVIOR STATEMENT	STANDARDS
16. Level Speed Change (LSC)	
<ul style="list-style-type: none"> ● Perform a level speed change per the FTI. 	<ul style="list-style-type: none"> ● Begins in normal cruise configuration. ● Completes Landing Checklist. ● Attempts to trim off control pressures during maneuver.
17. Turn Pattern	
<ul style="list-style-type: none"> ● Perform a turn pattern per the FTI. 	<ul style="list-style-type: none"> ● Commences on cardinal heading. ● Recognizes bank angle $\pm 10^\circ$. ● Attempts to reverse turn/roll out within $\pm 20^\circ$ of proper heading.
18. Power Off Stall (POS)	
<ul style="list-style-type: none"> ● Perform power off stall and recover per the FTI. 	<ul style="list-style-type: none"> ● Understands this maneuver simulates the feathered condition. ● Recognizes proper glide attitude. ● Attempts to minimize altitude loss during recovery. ● Returns to appropriate glide attitude.
19. Approach Turn Stall (ATS)	
<ul style="list-style-type: none"> ● Perform an approach turn stall and recover per the FTI. 	<ul style="list-style-type: none"> ● Commences in the correct configuration. ● Performs clearing turn. ● Enters stall at/above 6500 feet AGL. ● Initiates recovery at stall entry. ● Attempts to minimize altitude loss during recovery.
20. Spin	
<ul style="list-style-type: none"> ● Perform spin per the FTI. 	<ul style="list-style-type: none"> ● Performs clearing turn. ● Must recover prior to 10,000 feet AGL. ● Communicates accurate spin indications over ICS. ● Initiates proper recovery after verifying spin indications.
21. Precision Aerobatics/AGSM	
<ul style="list-style-type: none"> ● Recall in-flight precision aerobatic maneuver entry parameters. ● Perform proper anti-g straining maneuver. 	<ul style="list-style-type: none"> ● Nongraded item. Demo only. ● Executes anti-g straining maneuver in flight without error.

BEHAVIOR STATEMENT	STANDARDS
22. Simulated Power Loss	
<ul style="list-style-type: none"> ● Perform simulated engine failure procedures, given simulated power loss above 3000 feet AGL. 	<ul style="list-style-type: none"> ● Maintains minimum flying speed. ● Selects suitable landing site. ● Navigates to intercept ELP. ● Configures properly for landing.
23. Practice Precautionary Emergency Landing (PPEL)	
<ul style="list-style-type: none"> ● Given simulated EP requiring PEL, perform PPEL procedures per the FTI. 	<ul style="list-style-type: none"> ● Selects nearest suitable landing field. ● Manages airspeed as appropriate for climb or acceleration to high key. ● Navigates to intercept ELP. ● Configures properly for landing.
24. Landing Pattern	
<ul style="list-style-type: none"> ● Execute/Direct landing pattern per the FTI. 	<ul style="list-style-type: none"> ● Maintains/Directs: <ul style="list-style-type: none"> ▶ Downwind <ul style="list-style-type: none"> ▪ Ensures proper downwind configuration and spacing. ▪ Initiates Before Landing Checklist. ▶ Abeam <ul style="list-style-type: none"> ▪ Executes four T's (transition, trim, turn, and talk). ▪ Ensures Landing Checklist complete. ▶ Approach turn/Final <ul style="list-style-type: none"> ▪ Maintains/Directs appropriate airspeed for selected flap setting ± 5 KIAS.

BEHAVIOR STATEMENT	STANDARDS
25. Landings	
<ul style="list-style-type: none"> ● Execute/Direct normal approach/landing per the FTI. 	<ul style="list-style-type: none"> ● Maintains/Directs: <ul style="list-style-type: none"> ▶ Correct glidepath until flare initiation. ▶ Minimum no flap (110 KIAS), takeoff flap (105 KIAS), and full flap (100 KIAS), ±5 KIAS for all until landing transition. ● Attempts to touch down with: <ul style="list-style-type: none"> ▶ Appropriate crosswind controls. ▶ Main gear first (nose-high attitude). ▶ Nose gear ±10 feet of centerline. ● Recognizes the touchdown zone as defined by Contact FTI and local instructions. ● Executes/Directs full stop or touch-and-go procedures per FTI.
26. Go Around/Waveoff	
<ul style="list-style-type: none"> ● When appropriate, discontinue approach to landing. 	<ul style="list-style-type: none"> ● Recognizes and initiates waveoff when required by the FTI and/or safety-of-flight. ● Ensures positive climb and configuration during waveoff.
27. Course Rules/Home Field Entry (HFE)	
<ul style="list-style-type: none"> ● Return to home field in accordance with local procedures. 	<ul style="list-style-type: none"> ● Obtains ATIS information. ● Conducts adequate recovery briefing. ● Visually navigates via prescribed routing.

INSTRUMENTS

BEHAVIOR STATEMENT	STANDARDS
28. Use of ATIS/PMSV/FSS	
<ul style="list-style-type: none"> ● Use ATIS/PMSV to update destination conditions IAW the FTI. ● Use FSS as required to open, change, and close flight plans. 	<ul style="list-style-type: none"> ● Checks ATIS prior to contacting destination approach control. ● Updates destination and alternate weather with PMSV/AWOS/FSS enroute, when required. ● Contacts FSS to: <ul style="list-style-type: none"> ▶ Open flight plans after departure. ▶ Change flight plans enroute. ▶ Close flight plans after landing.
29. In-Flight Computations	
<ul style="list-style-type: none"> ● Compute IAW the FTI: <ul style="list-style-type: none"> ▶ Ground speed. ▶ ETE (to turnpoints). ▶ Fuel at destination IAF. 	<ul style="list-style-type: none"> ● Computes: <ul style="list-style-type: none"> ▶ Ground speed ± 12 knots. ▶ ETA ± 1 minute. ▶ Fuel at destination IAF within ± 30 pounds of instructor calculations. ● Correctly complete procedures IAW FTI.
30. Crew Resource Management (CRM)	
<ul style="list-style-type: none"> ● Use available crew and cockpit resources to minimize workload and enhance situational awareness. 	<ul style="list-style-type: none"> ● Coordinates and utilizes sound CRM principles.
31. In-Flight Briefings	
<ul style="list-style-type: none"> ● Accomplish in-flight briefings IAW the FTI. 	<ul style="list-style-type: none"> ● Provides takeoff brief, departure brief, holding brief, field brief, DRAFT report (as required), approach brief, and missed approach/climbout instructions when required.
32. Direct to VOR	
<ul style="list-style-type: none"> ● Establish the aircraft inbound to the station IAW the FTI. 	<ul style="list-style-type: none"> ● Establishes and maintains aircraft on inbound radial, within ± 3 radials or 1.5 miles (whichever is less). ● Correctly completes procedures IAW FTI.

BEHAVIOR STATEMENT	STANDARDS
33. Enroute Procedures	
<ul style="list-style-type: none"> ● Maintain aircraft's track on appropriate radial or airway. ● Identify an intersection using appropriate NAVAID(s). 	<ul style="list-style-type: none"> ● Maintains the lesser of ± 3 radials (VOR) or 1.5 miles (VOR) of centerline. ● Determines approximate wind direction $\pm 30^\circ$ and ± 15 knots and maintains proper crab angle $\pm 5^\circ$. ● Properly identifies required intersection using appropriate NAVAID(s). ● Gives position report as required. ● Leads turns when applicable IAW FTI.
34. Point-to-Point (PTP)	
<ul style="list-style-type: none"> ● Proceed direct to an assigned fix using VOR/DME point-to-point procedures IAW FTI. 	<ul style="list-style-type: none"> ● Expeditiously establishes a correct initial heading. ● Continuously updates heading to: <ul style="list-style-type: none"> ▶ Avoid large ($>20^\circ$) heading changes within two minutes prior. ▶ Arrive within two miles of desired point. ● Correctly completes procedures IAW FTI.
35. Arcing	
<ul style="list-style-type: none"> ● Direct per FTI: <ul style="list-style-type: none"> ▶ VOR/DME arcing. ▶ Arc-to-radial intercepts. ▶ Radial-to-arc intercepts. 	<ul style="list-style-type: none"> ● Maintains the arc ± 0.5 DME. ● Calculates lead points IAW FTI to join: <ul style="list-style-type: none"> ▶ Arc ± 0.5 DME. ▶ Radial $\pm 3^\circ$.
36. Station/Waypoint Passage	
<ul style="list-style-type: none"> ● Identify Station/Waypoint Passage IAW FTI. 	<ul style="list-style-type: none"> ● Identifies station passage for the NAVAID in use or selected GPS waypoint.

BEHAVIOR STATEMENT	STANDARDS
37. Holding (VOR)	
<ul style="list-style-type: none"> ● Direct VOR holding IAW the FTI. 	<ul style="list-style-type: none"> ● Computes proper entry turn. ● Directs holding airspeed three minutes or less from the holding fix. ● Establishes and maintains aircraft within holding airspace. ● Properly calculates and applies drift corrections IAW the FTI. ● Properly calculates and applies timing corrections IAW the FTI.
38. Holding (GPS)	
<ul style="list-style-type: none"> ● Direct GPS holding IAW the FTI. 	<ul style="list-style-type: none"> ● Properly sets GPS for holding. ● Computes proper entry turn. ● Directs holding airspeed three minutes or less from the holding fix. ● Establishes and maintains aircraft within holding airspace. ● Properly calculates and applies drift corrections IAW the FTI.
39. VOR Approach	
<ul style="list-style-type: none"> ● Direct an approach IAW the FTI. 	<ul style="list-style-type: none"> ● IAF to FAF maintains course ± 1 dot or valid intercept. ● Properly directs the pilot to slow and take BAC IAW the FTI. ● By the FAF (when depicted) or initiating descent to MDA, completes landing checklist. ● Final: <ul style="list-style-type: none"> ▶ Maintains ± 1 dot of desired course. ▶ Reaches and maintains MDA +100/-0 feet. ● 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. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.

BEHAVIOR STATEMENT	STANDARDS
40. GPS Approach	
<ul style="list-style-type: none"> ● Direct a GPS approach IAW the FTI. 	<ul style="list-style-type: none"> ● IAF to FAF maintains course ± 1 dot or valid intercept. ● By the FAF: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Ensures approach goes Active prior to descent from FAF. ● Final: <ul style="list-style-type: none"> ▶ Reaches and maintains MDA $+100/-0$ feet. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the MDA. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.
41. Localizer Approach	
<ul style="list-style-type: none"> ● Direct a localizer approach IAW the FTI. 	<ul style="list-style-type: none"> ● Properly directs the pilot to slow and take BAC. ● By the FAF or initiating descent to MDA, completes landing checklist. ● Final: <ul style="list-style-type: none"> ▶ Maintains ± 1 dot of desired course (LOC). ▶ Reaches and maintains MDA $+100/-0$ feet. ▶ Begins backup timing at the FAF when applicable. ▶ Ensures missed approach/climbout instructions briefed prior to descent to the MDA. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the MDA. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.

BEHAVIOR STATEMENT	STANDARDS
42. ILS Approach	
<ul style="list-style-type: none"> ● Direct the approach IAW the FTI. 	<ul style="list-style-type: none"> ● Prior to initiating descent to DH, completes landing checklist. ● Final: <ul style="list-style-type: none"> ▶ Maintains ±1 dot of localizer course. ▶ Maintains ±1 dot on glideslope. ▶ Begins backup timing for the localizer approach when applicable. ▶ Ensures missed approach/climbout instructions briefed prior to descent to the DH. ● Determines if the aircraft is in a position to execute a safe landing upon reaching the DH. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.
43. Circling Approach	
<ul style="list-style-type: none"> ● Direct a circling maneuver to the landing runway IAW the FTI. 	<ul style="list-style-type: none"> ● Provides the pilot proper instructions to establish the aircraft into the circling maneuver for the landing runway. ● Selects appropriate MDA for aircraft category. ● Directs the pilot as needed to maintain at/above MDA consistent with weather. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.

BEHAVIOR STATEMENT	STANDARDS
44. Radar Approach (RA)/Ground-Controlled Approach (GCA)	
<ul style="list-style-type: none"> ● Direct the pilot, as needed, to properly comply with the FTI parameters of a precision approach radar (PAR) or airport surveillance radar (ASR) approach. 	<ul style="list-style-type: none"> ● Ensures lost communication and missed approach/climbout instructions are received prior to starting descent to DH 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 on reaching the DH or MDA. ● Directs the pilot as needed to execute the appropriate missed approach or climbout instructions.
45. Missed Approach	
<ul style="list-style-type: none"> ● Direct a missed approach per the FTI. 	<ul style="list-style-type: none"> ● Directs appropriate missed approach procedure when field not in sight and, <ul style="list-style-type: none"> ▶ Nonprecision: <ul style="list-style-type: none"> ▪ Inside FAF and full scale CDI deflection. ▪ At specified MAP. ▶ Precision, first of: <ul style="list-style-type: none"> ▪ Decision height. ▪ Controller-directed. ▶ Or, not in position for safe landing.
46. Visual Glideslope Interpretation	
<ul style="list-style-type: none"> ● Recognize and discuss various airport lighting aids, approach lighting systems, visual glideslope indicators. 	<ul style="list-style-type: none"> ● Provides IP with correct interpretation of visual glideslope indicators.
47. Instrument Turnpoint Procedures	
<ul style="list-style-type: none"> ● Perform instrument turnpoint calls. 	<ul style="list-style-type: none"> ● Makes appropriate instrument two minutes prior, mark on top, and wings level calls using proper format and terminology (80% accuracy).

VISUAL NAVIGATION

BEHAVIOR STATEMENT	STANDARDS
48. VNAV Chart	
<ul style="list-style-type: none"> ● Prepare a visual navigation chart. ● Demonstrate chart/route knowledge. 	<ul style="list-style-type: none"> ● Prepares a visual low-level 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 $\pm 2^\circ$ plotting (course) without error. ● Ensures all CHUM present and correct, chart signed, and all airspace and diverts/conflicting airfields annotated on chart. ● Relates to IP in brief: turnpoint description, features inside TP circle, hazards on route, and all altitude changes.
49. Turnpoint Identification	
<ul style="list-style-type: none"> ● Identify turnpoints on a visual low-level route. 	<ul style="list-style-type: none"> ● Given a low-level route, identifies visual low-level turnpoints to an accuracy of 80%.
50. VNAV Turnpoint Procedures	
<ul style="list-style-type: none"> ● Perform VNAV turnpoint calls. 	<ul style="list-style-type: none"> ● Makes appropriate VNAV two minutes prior, mark on top, and wings level calls using proper format and terminology (90% accuracy).
51. Intermediate Checkpoint Identification	
<ul style="list-style-type: none"> ● Identify intermediate checkpoints. 	<ul style="list-style-type: none"> ● Given a specified route, identifies intermediate checkpoints to an accuracy of 50%. ● Maintains course within ± 2 NM.
52. Hazard Calls	
<ul style="list-style-type: none"> ● Perform hazard calls. 	<ul style="list-style-type: none"> ● Makes appropriate hazard calls using proper format and terminology (90% accuracy). ● Clears aircraft of weather, hazards, obstacles, and other aircraft.
53. Standard Time Corrections	
<ul style="list-style-type: none"> ● Navigate from point-to-point using dead reckoning and visual references. 	<ul style="list-style-type: none"> ● Recommends airspeed adjustments to arrive on target (± 1 minute). ● Recommends speed adjustments in the correct magnitude and direction to within ± 5 knots of IP calculations.

BEHAVIOR STATEMENT	STANDARDS
54. Standard Course Corrections	
<ul style="list-style-type: none"> ● Navigate from point-to-point using dead reckoning and visual references. 	<ul style="list-style-type: none"> ● Maintains or makes recommendations to maintain a visual low-level course, given a specified course ± 2 NM. ● Recommends heading changes to $\pm 2^\circ$ of IP calculations.
55. Altitude Selection/Compliance	
<ul style="list-style-type: none"> ● Select the proper altitude to and from low-level route. ● Maintain low-level route altitude. 	<ul style="list-style-type: none"> ● Directs IP to climb/descend as required to maintain VFR hemispheric altitudes. ● Directs IP to maintain low-level route altitude.
56. Fuel Management/Analysis	
<ul style="list-style-type: none"> ● Determine fuel state and analyze fuel consumption trends. 	<ul style="list-style-type: none"> ● Determines actual fuel state in flight and determines if above or below mission completion fuel state without error. ● Makes recommendations to continue low-level route or RTB early to home field without error. ● Maintains OPNAVINST 3710/TW-6/SQ requirements for MCF.
57. Wind Consideration	
<ul style="list-style-type: none"> ● Analyze current wind conditions. 	<ul style="list-style-type: none"> ● Determines wind direction and speed within $\pm 45^\circ$ and ± 10 knots.

FORMATION

BEHAVIOR STATEMENT	STANDARDS
58. Taxi and Marshal	
<ul style="list-style-type: none"> ● Perform taxi and marshal flight. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Lead monitors wingman's position.
59. Formation Takeoff	
<ul style="list-style-type: none"> ● Perform section, interval takeoff. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Lead: <ul style="list-style-type: none"> ▶ Monitors wingman. ▶ Directs appropriate type of takeoff for weather conditions. ● Wing: Advises IP of airspeeds, fuel caps, engine and gear status.
60. Crew Coordination Communications	
<ul style="list-style-type: none"> ● Effectively communicate mission essential information. 	<ul style="list-style-type: none"> ● Performs IAW FTI.
61. Wingman Communication	
<ul style="list-style-type: none"> ● Safely and effectively communicate with wingman using radio/visual/aircraft. 	<ul style="list-style-type: none"> ● Performs IAW FTI to 90% accuracy.
62. In-Flight Planning/Area Management	
<ul style="list-style-type: none"> ● Plan and execute a sequence of maneuvers or actions. ● Understand current and required position. 	<ul style="list-style-type: none"> ● Efficiently sequences maneuvers. ● Adjusts mission profile for external factors (weather, traffic, etc.). ● Maintains positional awareness using ground references, navigational aids, or FLIP publications.
63. Fuel Management	
<ul style="list-style-type: none"> ● Monitor fuel status for formation to allow for safety of flight and mission accomplishment. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Conducts fuel checks as required by FTI or every 20 minutes. ▶ Guarantees that flight is completed IAW SOP/NATOPS/FTI fuel requirements. ● Lead/Wing: Recognizes and calls JOKER/BINGO fuel as necessary with 100% accuracy.

BEHAVIOR STATEMENT	STANDARDS
64. Enroute Formation	
<ul style="list-style-type: none"> ● Direct and execute enroute formations as required by weather and/or mission requirements. 	<ul style="list-style-type: none"> ● Performs IAW FTI.
65. Parade Position	
<ul style="list-style-type: none"> ● Describe and identify position. 	<ul style="list-style-type: none"> ● Recognizes parameters IAW FTI: <ul style="list-style-type: none"> ▶ Lower UHF antenna on pitot tube. ▶ Near pitot tube on prop arc.
66. Parade Sequence	
<ul style="list-style-type: none"> ● Conduct sequence efficiently and effectively. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maintains working area. ▶ Clears for the formation. ▶ Completes all maneuvers. ▶ Monitors wingman. ● Wing clears for formation.
67. Breakup and Rendezvous	
<ul style="list-style-type: none"> ● Conduct expeditious and safe breakup and rendezvous. 	<ul style="list-style-type: none"> ● Recalls procedures IAW FTI with 100% accuracy.
68. Underrun	
<ul style="list-style-type: none"> ● Direct underrun as necessary for safety of flight or training. 	<ul style="list-style-type: none"> ● Recalls/directs procedures IAW FTI with 100% accuracy.
69. Lead Change	
<ul style="list-style-type: none"> ● Execute an expeditious and safe lead change. 	<ul style="list-style-type: none"> ● Considers airspace and weather in planning maneuvers. ● Monitors wingman. ● Performs IAW FTI.
70. Lost Wingman	
<ul style="list-style-type: none"> ● Execute lost wingman. 	<ul style="list-style-type: none"> ● Wing: Immediately directs IP to execute procedures. ● Safely executes procedures with 100% accuracy IAW the FTI.
71. Cruise Position	
<ul style="list-style-type: none"> ● Describe and identify position. 	<ul style="list-style-type: none"> ● Recognizes parameters IAW FTI: <ul style="list-style-type: none"> ▶ Within 60° bearing cone. ▶ 3- to 6-plane widths. ▶ 20 feet of stepdown.

BEHAVIOR STATEMENT	STANDARDS
72. Tail-Chase	
<ul style="list-style-type: none"> ● Execute tail-chase profile. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Lead: <ul style="list-style-type: none"> ▶ Advises IP of wingman's position and status. ▶ Advises IP of aircraft parameters including airspeed, altitude, Gs. ▶ Directs flight to remain within assigned area. ▶ Clears for the formation. ● Wingman: <ul style="list-style-type: none"> ▶ Clears for the formation. ▶ Advises IP of applicable aircraft parameters including airspeed, altitude, Gs.
73. Tactical Spread	
<ul style="list-style-type: none"> ● Enroute medium/high level formation position used to reduce dash 2 fatigue and improve clearing. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maintains area/route orientation. ▶ Clears flight path. ▶ Checks six o'clock position. ● Wingman directs appropriate geometry (combat spread, in-place turns, cross turns, etc.) IAW FTI.
74. Rejoin	
<ul style="list-style-type: none"> ● Reform to parade while lead is maintaining constant heading or in constant AOB turn. 	<ul style="list-style-type: none"> ● Recalls procedures with 100% accuracy IAW FTI.
75. VFR Arrival	
<ul style="list-style-type: none"> ● Conduct VFR recovery. 	<ul style="list-style-type: none"> ● Performs IAW FTI, Course Rules, FAR/AIM, NATOPS.
76. Formation Approach	
<ul style="list-style-type: none"> ● Execute an instrument or visual straight-in approach as lead or wingman. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maintains contact or instrument parameters and procedures. ▶ Uses wingman consideration. ● Wingman performs IAW FTI.

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Chapter IX

Master Materials List

Individually Issued Materials

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT	COST EACH
1. Academic Programmed Instructional Units	CNAT P	10	\$0.31
2. Flight Training Instructions	CNAT P	6	3.00
3. T-6A NATOPS Flight Manual	NAVAIR A1-T6A AAA-NFM-100	1	3.50
4. T-6A NATOPS Pocket Checklist	NAVAIR 01-T6A AAA-NPCL-100	1	2.00
5. NATOPS Instrument Flight Manual		1	2.50
6. DOD FLIP Publications			
a. Low Altitude Enroute Charts		3	4.04
b. IFR Enroute Supplement		1	1.00
c. Low Altitude Instrument Approach Procedures		2	0.78
d. High Altitude Instrument Approach Procedures		1	0.31
7. Military Flight Plan	DD 175	4	
8. Weather Briefing Form	DD 175-1	20	
9. Flight Crew Checklist		1	
10. Supporting Materials			
a. Navigation/Landing Aid (2B47)	Instrument Training	6	
b. T-6A Aircraft Cockpit	Familiarization Training	6	

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT	COST EACH
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11. Aircraft and Major Training Devices

- a. T-6A Aircraft.
- b. Cockpit Procedures Trainer quantity controlled by Naval Air Warfare Center Training Systems Division (NAVAIRWARCENTRASYS DIV), Training Material Management Division, Inventory Control Branch (Code 5204).
- c. Operational Flight Trainer quantity controlled by NAVAIRWARCENTRASYS DIV, Training Material Management Division, Inventory Control Branch (Code 5204). Cost listed in NAVAIRWARCENTRASYS DIV Directory of Naval Training Devices Cognizance Symbol 2"0".