

NAVAL AIR TRAINING COMMAND



**NAS CORPUS CHRISTI, TEXAS
CIN O-2A-0108.O-2A-0109**

CNATRAINST 1542.140D

CHIEF OF NAVAL AIR TRAINING



PRIMARY MULTI-SERVICE PILOT TRAINING SYSTEM CURRICULUM 2009



DEPARTMENT OF THE NAVY

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

CNATRAINST 1542.140D

N711

08 MAY 09

CNATRA INSTRUCTION 1542.140D

Subj: PRIMARY MULTI-SERVICE PILOT TRAINING SYSTEM

1. Purpose. To publish the curriculum for training USN, USMC, USCG, USAF, and foreign military student aviators in the T-34C Primary phase of flight training.

2. Cancellation. CNATRAINST 1542.140C.

3. Action. This instruction is effective on receipt. No changes will be made without the written authorization of the Chief of Naval Air Training (CNATRA).

4. Forms

a. The Aviation Training Forms required by this directive are automated in the Training Integrated Management System (TIMS) at Training Air Wing (TRAWING) FOUR and TRAWING FIVE. This system has been assigned a system form number of CNATRA 1542/2022. CNATRA point of contact is the current Pipeline Training Officer, CNATRA (N711), DSN 861-1597. An update of these forms shall be accomplished no later than the issuance of this curriculum.

b. CNATRA-GEN forms may be procured by submitting a DD Form 1348 to the Commanding Officer, Naval Air Station, Pensacola, Supply Department, Pensacola, FL 32508-5002. TRAWING specific computer system products are the responsibility of the individual TRAWINGS.



JAMES A. CRABBE
Chief of Staff

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COURSE DATA

1. Course Title. Primary Multi-Service Pilot Training System (MPTS).
2. Course ID Number (CIN). Primary MPTS, Q-2A-0108; Air Force Formation, Q-2A-0109.
3. Locations. NAS Corpus Christi, NAS Whiting Field.
4. Course Status. Active.
5. Course Mission. Primary MPTS is designed to qualify graduates for follow-on advanced flight training and to prepare them for their future responsibilities as military officers.
6. Prerequisite Training. Successful completion of Navy Preflight Indoctrination Curriculum, Q-9B-0020. Air Force Formation training requires successful completion of Primary MPTS and selection for USAF Advanced Fighter/Bomber Track.
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 are as follows:
 - a. Primary: TW-4: 127
TW-5: 131
 - b. AF Formation: 9
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 FOUR (COMTRAWING FOUR).
13. Quota Management Authority. Chief of Naval Air Training.

14. Quota Control. CNO.

15. Course Training Subjects

a. Ground Training

ADMINISTRATION		
Stage	Symbol	Hours
Check-In	G0101	5.5
Checkout	G0120	0.5
Totals		6.0

GROUND TRAINING		
Stage	Symbol	Hours
Bailout Lecture/Trainer	G0102-3	2.0
Preflight Demo	G0104	3.0
Emergency Procedures (CAI)	G0105-10	6.0
Practice EP Exam (CAI)	G0111	1.0
Emergency Procedures Exam	G0112	1.0
Aviation Safety Program (MIL)	G0113	1.0
GLOC/GTIP (MIL)	G0114	1.0
Airsickness Awareness (Lecture)	G0115	1.0
Course Rules (MIL)	G0116	5.0
Course Rules Exam	G0117	1.0
Wheels Watch (MIL)	G0118	2.0
MPTS Brief (MIL)	G0119	1.0
T-34C Aircraft Systems (Lecture/Exam)	G1001-5	24.5
Crew Resource Management (MIL)	G1006	2.0
Totals		51.5

b. Flight Support

INITIAL FLIGHT SUPPORT		
Stage	Symbol	Hours
Day Contact Flight Procedures (CAI/MIL)	C0101-10	5.7
Night Contact Flight Procedures (CAI)	C0111	0.5
Safe-for-Solo (MIL)	C0201	1.0
Safe-for-Solo Exam	C0202	1.0
Flight Indoctrination (FAM-0)	C1001	3.0
BIFP (CAI)	I0101-4	4.0
Meteorology Flight Planning (CAI/MIL)	I0201-10	11.5
Meteorology Exam (CAI)	I0211	1.5
IFR Academic Training (CAI/Lecture/Lab/MIL)	I0212-43	40.0
End-of-Course Exam (CAI)	I0244	3.0
RI Concepts (MIL)	I0301	2.0
RIFP I (CAI/MIL)	I0302-7	11.0
GPS Procedures/Flight Planning Problems (CAI)	I0308	2.0
RIFP II (MIL)	I0309	3.0
Navigation Flight Procedures (CAI/MIL)	N0101-8	6.0
Navigation Exam	N0109	1.0
FORMFP (MIL)	F0101	4.0
FORMFP Exam	F0102	1.0
Totals		101.2

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

INITIAL FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C	
	Flts	Hrs	Flts	Hrs	Dual Flts Hrs	Solo Flts Hrs
Cockpit Procedure	5	6.5				
Day Contact					16 29.2	4 6.9
Day Contact Check					1 2.0	
Night Contact					2 3.0	
Basic Instruments			7	9.1	3 4.5	
Radio Instruments			9	11.7	5 9.0	
Instrument Navigation			10	13.0	4 8.0	
Instrument Check					1 2.0	
Day Navigation					2 3.2	
Night Navigation					2 3.2	
Basic Formation					5 10.5	1 1.5
Cruise Formation					3 6.0	
Totals	5	6.5	26	33.8	44 80.6	5 8.4

d. Air Force Fighter/Bomber Flight Support

AIR FORCE FIGHTER/BOMBER FLIGHT SUPPORT		
Stage	Symbol	Hours
Air Force Formation Flight Procedures (MIL)	F0301	2.0
Air Force Formation Exam	F0302	1.0
Totals		3.0

e. Air Force Fighter/Bomber Flight Training. The programmed times for each phase, stage, and media are:

AIR FORCE FIGHTER/BOMBER FLIGHT TRAINING				
Flight/Events	CPT Flts Hrs	SIM Flts Hrs	T-34C	
			Dual Flts Hrs	Solo Flts Hrs
AF Formation			6 12.0	
Totals			6 12.0	

16. Training Time Analysis

ADDITIONAL TRAINING TIME PER CURRICULUM HOUR/EVENT				
Training Area	Brief/Preflight/ Taxi	Prep Study	Taxi/ Debrief	Total
Flight	1.75	2.0	1.00	4.75
Simulator/CPT	0.50	2.0	0.50	3.0
Academic and Flight Support	0.25		0.25	0.5

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

18. Obligated Service. Refer to MILPERSMAN Article 661036 for Naval personnel or to AFI 36-2107 for USAF personnel.

19. Primary Instructional Methods. Lecture, CAI, self- and group-paced study, and in-flight instruction.

20. Preceding Curriculum Data. This curriculum replaces CNATRINST 1542.140C.

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.

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ABBREVIATIONS

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

- a. AF - Air Force
- b. AFI - Air Force Instruction
- c. AGL - Above Ground Level
- d. AGSM - Anti-Gravity Straining Maneuver
- e. AOA - Angle of Attack
- f. AOB - Angle of Bank
- g. ASI - Aviation Student Indoctrination
- h. ASR - Airport Surveillance Radar
- i. ATC - Air Traffic Control
- j. ATF - Aviation Training Form
- k. ATIS - Automated Terminal Information Service
- l. ATJ - Aviation Training Jacket
- m. ATS - Aviation Training Summary or Approach Turn Stall
- n. AWOS - Automated Weather Observing System
- o. BAC - Basic Approach Configuration
- p. BAW - Basic Air Work
- q. BI - Basic Instruments
- r. BIFP - Basic Instruments Flight Procedures
- s. CA - Class Advisor
- t. CABT - Constant Angle of Bank Turn
- u. CAI - Computer-Assisted Instruction
- v. CBT - Computer-Based Training
- w. CDI - Course Deviation Indicator

x.	CDO	-	Command Duty Officer
y.	CNATRA	-	Chief of Naval Air Training
z.	CNO	-	Chief of Naval Operations
aa.	CO	-	Commanding Officer
ab.	CPT	-	Cockpit Procedures Trainer
ac.	CR	-	Course Rules
ad.	CRCO	-	Constant Rate Climbs and Descents
ae.	CRM	-	Crew Resource Management
af.	CTAF	-	Common Traffic Advisory Frequency
ag.	CTS	-	Course Training Standard
ah.	DCON	-	Day Contact
ai.	DCONFP	-	Day Contact Flight Procedures
aj.	DH	-	Decision Height
ak.	DME	-	Distance Measuring Equipment
al.	DOR	-	Drop On Request
am.	EFLIR	-	Electronic Flight Information Record
an.	ELP	-	Emergency Landing Pattern
ao.	EMFP	-	Emergency Flight Procedures
ap.	EOB	-	End of Block
aq.	EP	-	Emergency Procedure
ar.	EPL	-	Emergency Power Lever
as.	ET	-	Extra Training
at.	ETA	-	Estimated Time of Arrival
au.	ETE	-	Estimated Time Enroute
av.	FAA	-	Federal Aviation Administration
aw.	FAF	-	Final Approach Fix

ax.	FAR	-	Federal Aviation Regulation
ay.	FAWP	-	Final Approach Waypoint
az.	FDO	-	Flight Duty Officer
ba.	FFP	-	Full-Flap Landing
bb.	FIH	-	Flight Information Handbook
bc.	FLIP	-	Flight Information Publication
bd.	FORMFP	-	Formation Flight Procedures
be.	FP	-	Flight Procedures
bf.	FPC	-	Final Progress Check
bg.	FPM	-	Feet Per Minute
bh.	FSS	-	Flight Service Station
bi.	FTI	-	Flight Training Instruction
bj.	FWOP	-	Fixed-Wing Operating Procedures
bk.	GCA	-	Ground-Controlled Approach
bl.	GLOC	-	G-Induced Loss of Consciousness
bm.	GPS	-	Global Positioning System
bn.	GPSFP	-	Global Positioning System Flight Procedures
bo.	GPU	-	Ground Power Unit
bp.	GTIP	-	G-Tolerance Improvement Program
bq.	HAPL	-	High Altitude Power Loss
br.	HEFOE	-	Hydraulic, Electrical, Fuel, Oxygen, Engine
bs.	HFE	-	Home Field Entry
bt.	IAF	-	Initial Approach Fix
bu.	IAP	-	Initial Approach Procedure
bv.	IAW	-	In Accordance With
bw.	ICA	-	Initial Climb to Altitude

bx.	IFM	-	Instrument Flight Manual
by.	IFR	-	Instrument Flight Rules
bz.	IFS	-	Initial Flight Screening
ca.	IFT	-	Instrument Flight Trainer
cb.	ILS	-	Instrument Landing System
cc.	IMC	-	Instrument Meteorological Conditions
cd.	IMS	-	International Military Student
ce.	IMSO	-	International Military Student Officer
cf.	IP	-	Instructor Pilot
cg.	IPC	-	Initial Progress Check
ch.	ITT	-	Interstage Turbine Temperature
ci.	KIAS	-	Knots Indicated Airspeed
cj.	LAPL/P	-	Low Altitude Power Loss/Pattern
ck.	LSC	-	Level Speed Change
cl.	MAF	-	Maintenance Action Form
cm.	MAP	-	Missed Approach Point
cn.	MDA	-	Minimum Descent Altitude
co.	METAR	-	Meteorological Aviation Report
cp.	METRO	-	Meteorology
cq.	MIF	-	Maneuver Item File
cr.	MIL	-	Mediated Interactive Lecture
cs.	MOA	-	Military Operating Area
ct.	MPTS	-	Multi-Service Pilot Training System
cu.	NACWS	-	Naval Aviation Collision Warning System
cv.	NATOPS	-	Naval Air Training Operating Procedures Standardization

cw. NAVAID - Navigational Aid
cx. NAVFP - Navigation Flight Procedures
cy. NCONFP - Night Contact Flight Procedures
cz. NFL - No-Flap Landing
da. NM - Nautical Mile(s)
db. NLT - No Later Than
dc. NOTAMs - Notices to Airmen
dd. NSS - Navy Standard Score
de. OCF - Out-of-Control Flight
df. ODO - Operations Duty Officer
dg. OLF - Outlying Field
dh. OPNAV - Office of the Chief of Naval Operations
di. PAR - Precision Approach Radar
dj. PAS - Phase Aggregate Score
dk. PCL - Power Control Lever
dl. PMSV - Pilot Meteorological Information Service
dm. POS - Power Off Stall
dn. PPEL/P - Practice Precautionary Emergency
Landing/Pattern
do. PT - Procedure Turn
dp. R&E - Radio and Equipment
dq. RAIM - Receiver Autonomous Integrity Monitor
dr. RDO - Runway Duty Officer
ds. RI - Radio Instruments
dt. RIFP - Radio Instruments Flight Procedures
du. RIOT - Radio Instrument Operation Trainer

dv. RMI - Radio Magnetic Indicator
dw. RPM - Rotations Per Minute
dx. RRU - Ready Room Unsatisfactory
dy. RVFAC - Radar Vectors to Final Approach Course
dz. SFMCM - Slow Flight/Minimum Control Maneuver
ea. SFS - Safe for Solo
eb. SMS - Student Monitoring Status
ec. SNA - Student Naval Aviator
ed. SSR - Special Syllabus Requirement
ee. SYS - Systems
ef. TACAN - Tactical Air Navigation
eg. TAF - Terminal Aerodrome Forecast
eh. TOT - Time on Target
ei. T/O - Takeoff
ej. TRB - Training Review Board
ek. TTO - Training Time Out
el. USAF - United States Air Force
em. VDP - Visual Descent Point
en. VFR - Visual Flight Rules
eo. VHF - Very High Frequency
ep. VMC - Visual Meteorological Conditions
eq. VOR - VHF Omnidirectional Range
er. WINFLIR - Windows Flight Information Record
es. XO - Executive Officer

GLOSSARY

1. Advancing X. Completed event within the normal syllabus flow. Excludes events with last characters in the range 84-89.
2. Aviation Training Form. A grade sheet documenting student performance for all categories of training regardless of media, phase, or stage.
3. Aviation Training Jacket. The 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 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 and night flight familiarization, aerobatic maneuvers, and out-of-control flight procedures.
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) TRB Summary Form, generated by the TRB, that summarizes a specific student's progress in a given syllabus and provides detailed information on the application of MPTS training for that student. Deliverables indicate whether the quality and continuity of training provided was IAW CNATRAINST 1542.140D, the degree of influence of human factors on the student performance, and make a recommendation on elimination/retention based on those items.
14. Emergency Procedure. Any degradation of aircraft systems or flight conditions requiring pilot action or intervention.
15. 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.
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 or Executive Officer. The CO may designate, in writing, FPC duty to a qualified O-4 or above. This is only done if the CO or XO is unqualified or unavailable to instruct in the required stage. A satisfactory FPC returns the student to normal syllabus flow. An unsatisfactory FPC results in a TRB.
18. Flight Training Instruction. A CNATRA-approved manual describing flight procedures and techniques for each training stage.
19. Hours Per X (H/X). The average length for each event in a block, rounded to the nearest tenth of an hour.
20. 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.

21. 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-Navigation F-Formation
2 nd	Media	0-Ground Event 1-Academics 2-CPT/ Simulator (Sim) 3-N/A 4-Aircraft
3 rd	Block	Sequential, indicating block within stage.
4 th & 5 th	Event/check & identifier	Sequential, indicating event within block, or other event types as shown below: 84-Adaptation Flight 85-Practice Sim 86-Warmup 87-Extra Training 88-Initial Progress Check 89-Final Progress Check 90-Check Ride

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

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

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

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

26. Operating Procedures Manual. A training wing or squadron directive describing standard operating procedures for local fixed-wing aircraft.

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. MPTS consists of Primary and Advanced Phases of training.
29. Pink ATF. A standard ATF that is printed on pink paper. 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, deficient preflight planning, or unofficer-like qualities.
32. Special Syllabus Requirement. One time, ungraded demonstration item(s).
33. Stage of Training. All training of a particular type (Ground, Contact, Instruments, 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. Student Monitoring Status. Squadron-initiated status to address substandard student performance.
35. Training Media. MPTS media include aircraft, IFTs, CPTs, ground training, and CAI. The second character in the lesson identifier designates the training medium.
36. 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.
37. Warmup Event (SXX86). Additional events given to allow a student to regain a level of proficiency previously demonstrated which has diminished due to an extended break in training.
38. Yellow ATF. A standard ATF that is printed on yellow paper. The yellow ATF is used to denote an unsatisfactory event that does not generate a progress check, except for unsatisfactory events which result in an optional warmup. In this case, the ATF shall be printed on white paper.

Chapter I

General Instructions

1. Syllabus Management

- a. Distribution. Participating squadron personnel.
- b. Interpretation. The syllabus is directive. Should circumstances create situations not covered within the scope of this syllabus, or specific course of action appears to conflict with other directives, consult CNATRA (N71).
- c. Deviations. Document all deviations on the event's ATF.
- d. Changes. Recommended changes shall be submitted IAW CNATRAINST 1550.6E.
- e. Execution. All students execute Chapter II through VI.
- f. Syllabus Description. Primary MPTS is flown in the T-34C and is divided into stages. Stages are grouped by like flight training regimes such as Contact, Instrument, Navigation, and Formation. Each stage is subdivided into training blocks. The training blocks consist of a specified number of flights. MIFs identify the minimum acceptable level of performance in relation to the CTS that must be achieved at the completion of each training block.
- g. Grade Calculation

(1) Phase Aggregate Score (PAS). An 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 MPTS 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.

MPTS SNA Calculations. From a population of previous SNAs, an SNA's PAS is calculated using equation (1), below:

$$SNA_PAS = 50 + 10 * \left(0.9 * \frac{S - M1}{S1} + 0.1 * \frac{M2 - NMU}{S2} \right) \quad (1)$$

Where

S - SNA Score

NMU - SNA NMU

M1 - Squadron Average Score

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

S1 - Standard Deviation of Squadron Score

S2 - Standard Deviation of Squadron NMU

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

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

Where

PAS - NFS PAS

MPAS - Squadron Average PAS

SDPAS - Standard Deviation of Squadron PAS

h. Accelerated Students. Students with prior flight time, excluding IFS or IFS equivalent flight time, should 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. The following criteria will be used as a guideline to decide how long the student will be accelerated:

Private pilot license: C4000-C4390
Instrument rating: C4000-C4390
I2000-I2304
I4000-I4105

Squadron commanding officers have the authority to tailor the student's accelerated syllabus based on the student's past flying experience. ATFs for the events not flown will be completed with a note in the remarks section stating

"ACCELERATED - EVENT NOT FLOWN. ATF COMPLETED FOR ADMINISTRATIVE PURPOSES ONLY IAW CNATRAINST 1542.SERIES."

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 VFR (Contact, Formation, or Navigation) and an Instrument (BI/RI) syllabus event. Students must complete all events unless enrolled in an approved accelerated syllabus.

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

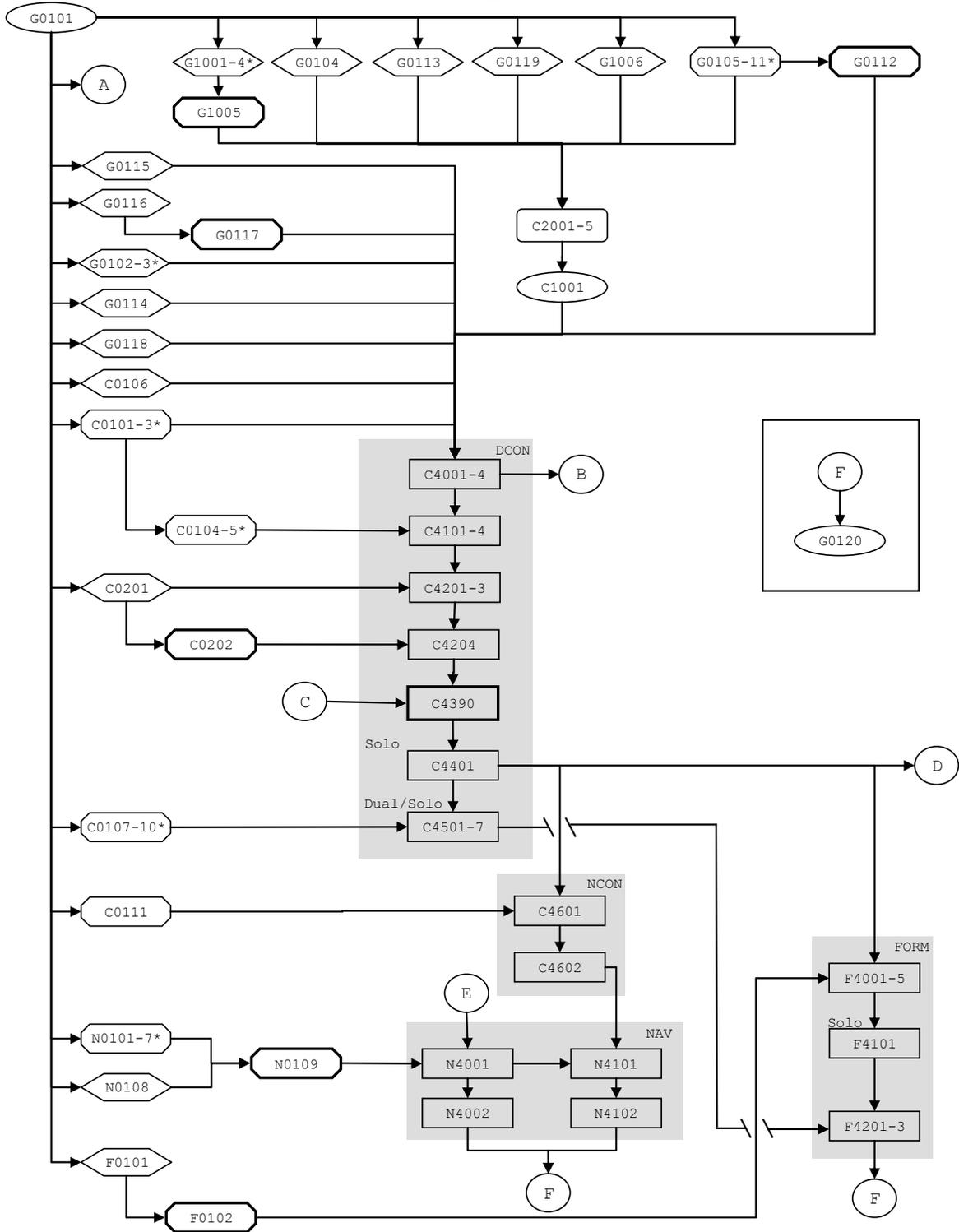
c. Landing Proficiency. Students should land any time they occupy the front cockpit. Students shall not land from the rear cockpit.

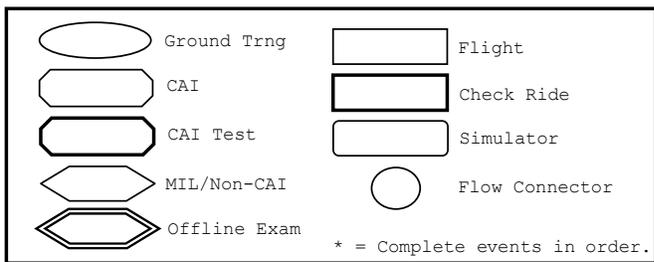
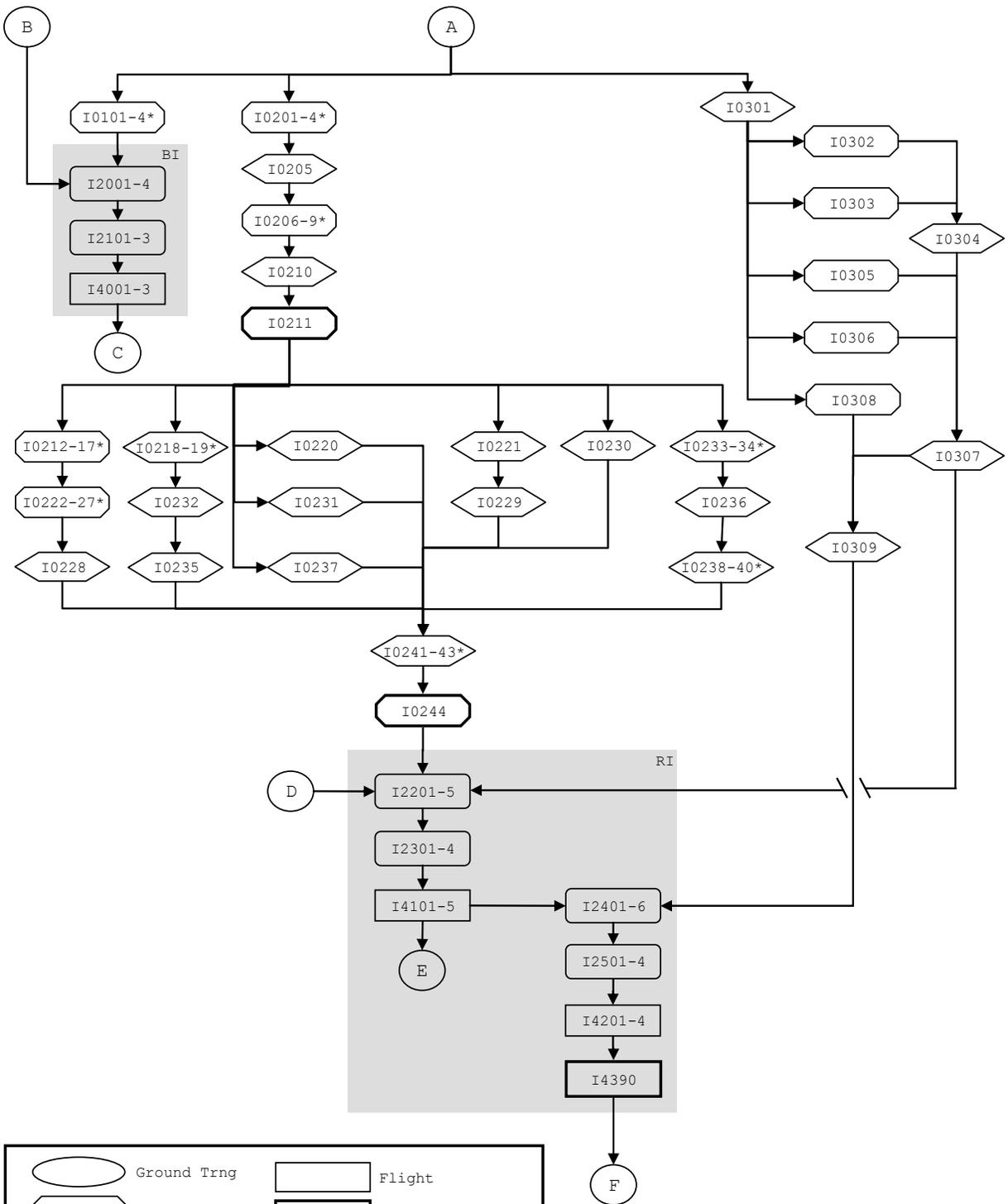
d. H/X. Instructor pilots shall plan and execute missions to meet H/X as closely as practical. If actual event length varies from H/X by more than 0.3 hrs, annotate reason(s) in ATF's general comments section.

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

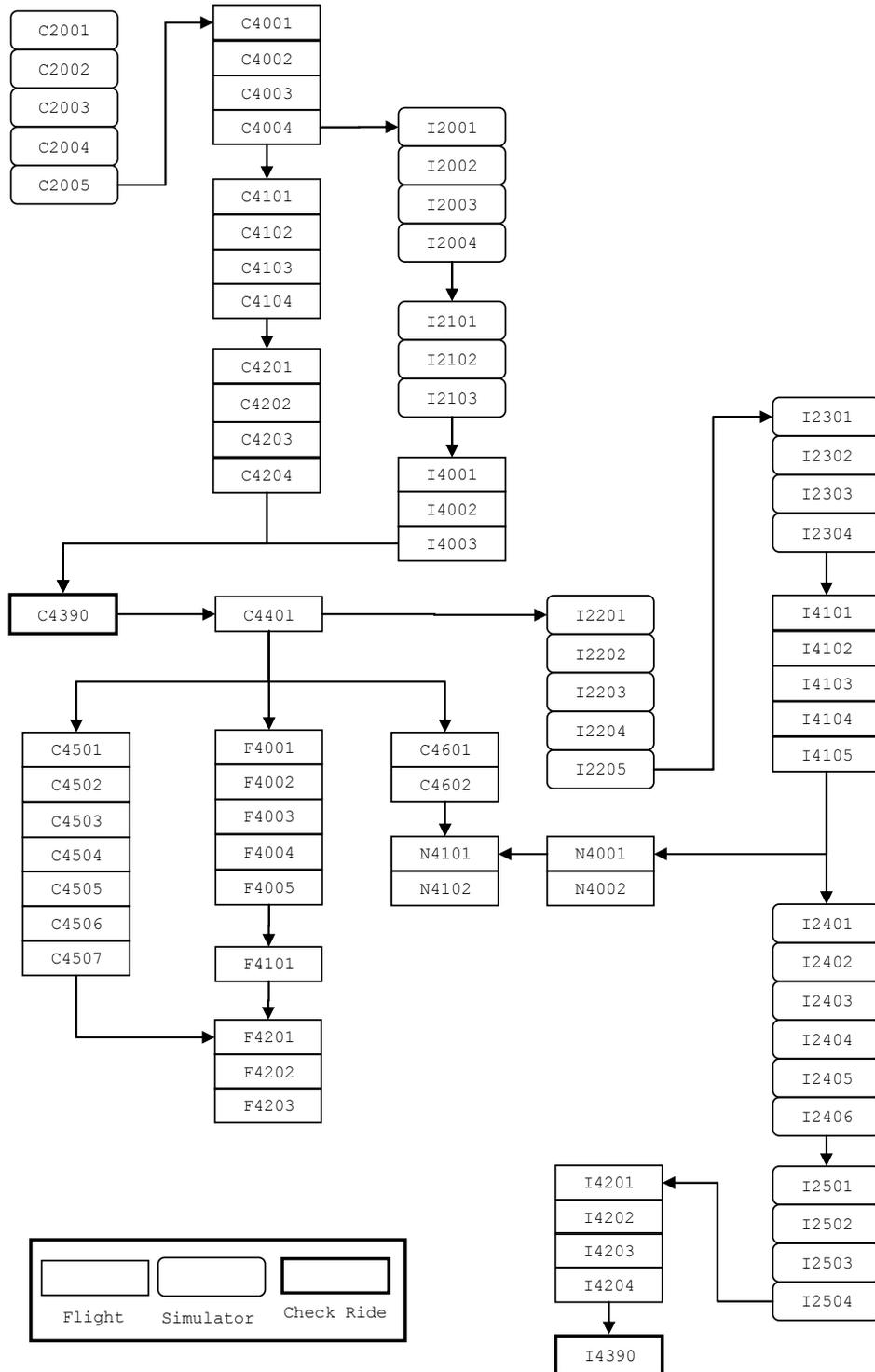
f. Aviation Training Jacket Reviews. Class Advisors, Flight Leaders, or Assistant Flight Leaders will conduct jacket reviews at least weekly. SMS students require weekly ATJ reviews with their flight leader.

PRIMARY COURSE PREREQUISITES (ALL EVENTS)

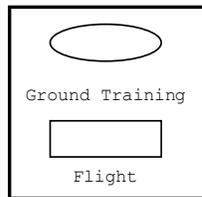
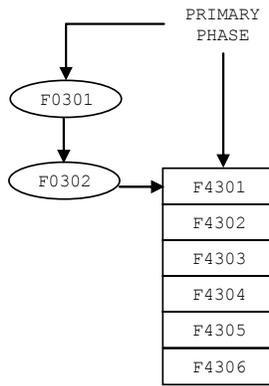




**PRIMARY COURSE FLOW
(FLIGHT/DEVICE EVENTS ONLY)**



AIR FORCE FIGHTER/BOMBER TRACK



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

a. Flight/Simulator

(1) If syllabus events remain in the block, the student shall progress to the next syllabus event, until the second consecutive unsatisfactory or third cumulative unsatisfactory in the block. Document any unsat event (except warmup event) on a yellow ATF unless a progress check is triggered.

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

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

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

(5) Failing an FPC results in a TRB.

(6) Unsatisfactory performance on warmup events does not count toward the cumulative total of unsatisfactory performances used to generate progress checks unless the unsatisfactory performance is in an area not affected by a delay in training such as general knowledge, EPs, and course rules.

(7) Unsatisfactory performance on EOB solo events (C4401, C4507, and F4101) will not be remediated. Unsatisfactory performance on C4503 and C4505 will be documented and the SNA will progress to the next event in block. If necessary, fly a C4587 to meet minimum solo time.

b. Ready Room Unsatisfactory

(1) In no case shall a student who meets the criteria for an RRU proceed to the flight portion of the event.

(2) An RRU on any syllabus event 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.

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

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

c. Academic. Failing two exams triggers an IPC or FPC as appropriate. Academic and ready room unsats are equivalent.

d. Remediation

(1) A dual CPT 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) EOB 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 fly solo.

(2) The student shall not accomplish any training except academic classes, examinations, and ground training events, provided the unsatisfactory event 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.

b. Composition

(1) Voting Members. The board consists of three voting members, one of whom is the Senior Member. The TRAWING commander designates the Senior Member in writing. Senior Member shall not be from the parent command.

(2) Other Members/Observers. At least one member will be from the student's parent service. For International Military Students, 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 been 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 IMSO, in the case of an IMS.

c. Deliverables

(1) A background paper that reflects the TRB majority vote and assesses the student's training quality while highlighting any irregularities.

(2) Use CNATRA 1542/1827 (Rev. 4-04), TRB Summary form.

5. Instructor Continuity

a. Students shall fly Contact syllabus events C4001-C4204 with their on-wing. Exceptions:

(1) Students shall fly three events within C4102-C4202 off-wing.

(2) The Commanding Officer, Executive Officer, Operations Officer, Flight Leader, or any DCON 'S'-qualified instructor may substitute as on-wing in the event the student's on-wing is not available and an on-wing change is not prudent. In order to maintain instructor continuity, every effort should be made to limit the total number of substitute on-wings.

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. Unsatisfactory performance on warmup events does not count toward the cumulative total of unsatisfactory performances used to generate progress checks unless the unsatisfactory performance is in an area not affected by a delay in training such as general knowledge, EPs, and course rules. A student whose performance meets the criteria for an RRU on a warmup shall be given an RRU and initiate progress check procedures. A warmup flight is not warranted between block I4000 and block I2200.

a. Warmups Between Stages. Warmup events shall not be given prior to the first flight in stage.

NOTE: A warmup flight is not warranted between contact/formation stages or contact/radio instrument simulators.

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.

(1) Additional Warmup Events

(a) The Operations Officer may direct additional warmup aircraft or simulator/CPT events for extended breaks in training.

(b) Award an additional safe-for-solo flight if more than five calendar days have elapsed since last safe-for-solo flight.

(2) Not Safe for Solo. If the student is not safe for solo:

(a) Count the flight as a warmup due to the student's loss of proficiency.

(b) The next flight shall be another safe-for-solo check and should be flown in the next six calendar days.

(c) An IPC/FPC shall follow failure of the second safe-for-solo.

CRITERIA FOR AWARDING WARMUP EVENTS		
Break* (Days)	Warmup Events	Remarks
1-6	None	<ul style="list-style-type: none"> ● Except solo events (see paragraph 6b(1)(b)).
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 event grade is Marginal or Unsatisfactory.

*Break = Julian Date - Julian Date last flown.

(3) Extended Training Delays. If the period between events is greater than 30 days, the squadron CO shall determine an appropriate warmup training plan to regain student proficiency IAW CNATRAINST 1500.4G.

(4) Unrequired Warmup Event. A warmup event is not required between events within the night contact or navigation blocks of training regardless of the length of delay between events, unless 14 days have elapsed since last flying any flight. In this case, a daytime contact warmup is required.

c. Event Type. Mandatory warmups shall be the last dual event flown in stage; optional warmups shall attempt the next event in stage (i.e., if the SNA is up for C4502 optional warmup following an 8-day break and fails to meet MIF, it shall be coded as a C4586 and the SNA will reattempt the C4502 on the next flight).

7. Additional Flights/Simulators

a. Extra Training 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. Only award these events to compensate for training inadequacies, e.g., poor event/maneuver continuity, or improper instruction.

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

2. Preceding an IPC. The Operations Officer may authorize one ET prior to an IPC.

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

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.

(c) Additional Events to Meet Minimum Syllabus Time

1. Events flown to meet minimum night or instrument time shall meet MIF for the block in which the ET is flown.

2. Events flown to meet minimum solo time shall be flown as a C4487.

(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.

8. Student Monitoring Status

a. The objective is to focus supervisory attention on 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 determined by the Flight Leader and Class Advisor or to address personal issues as determined by the Operations Officer. The goals and the required period in SMS must be annotated on CNATRA-GEN form 1542/16 in the student's ATJ.

d. If the student achieves the goals within the SMS period or when personal issues are resolved, the student returns to normal training flow and is removed from SMS. 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.

e. SMS is not intended to restrict a student's normal scheduling flow.

9. Ground Training and Briefing Requirements

a. Mission Preparation, Briefings, and Debriefings

(1) EOB Events. The IP shall carefully review the ATS in planning the EOB event to ensure the profile includes opportunities to reach MIF on all critical items and optional items attempted in the block.

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

(a) Thorough knowledge of:

1. The flight's discuss items and special syllabus requirements, as listed in Chapters III-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.

(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 will govern the time required for the debrief.

b. Emergency Procedures Briefing and Training

(1) EP training builds the student's confidence in the aircraft. The IP shall conduct emergency procedures training on all dual 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. MIFs listed in the MPTS are minimum stage/phase completion standards per maneuver.

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 dual 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. (See Student Performance Measurement/Application of Standards, page xi, Course Data, paragraph 21.)

(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. For solo flights, where an IP cannot observe individual flight maneuvers.

3. To indicate accomplishing all SSRs for that event. Specify the completed SSRs in the ATF's 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 deviations. Student requires constant coaching. A comment is required unless MIF is a U/2 or below.

(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. Student requires moderate coaching. **EXAMPLE:** Using bank angle to compensate for poor rudder trim would be an inappropriate correction for heading deviations.

(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. Student requires minimal coaching.

(e) Excellent (E/5 Level). Greatly surpasses CTS. Performance is correct, efficient, and skillful. Deviations are very minor. Corrections, if required, are initiated by the student and are appropriate, smooth, and rapid. Student requires no coaching. A comment is always required for a grade of E/5.

(2) Solo Events

(a) Assign NG/1 for performed maneuvers.

(b) IP or RDO may grade maneuvers observed to be either unsafe or exceptional on the solo ATF. These grades shall count toward overall PAS.

(3) Students shall be graded on General Knowledge Procedures, EPs, Headwork, and BAW for each completed flight event.

(4) Overall Event Grades. Overall event grades represent the student's progression through MPTS. 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.

(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 towards meeting EOB standards is insufficient.

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

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

1. C40 MIF requires an F/3 for takeoff. C41 MIF requires a G/4.

2. The student must meet or exceed F/3 to progress out of C40.

3. The student must maintain or exceed F/3 until the last C41 event, by which time the student must attain G/4.

(c) Exception. Students shall maintain or exceed MIF performance from one block to the next within stage or between media within stage. The exception is when MIF on a subsequent block is below the preceding block MIF. In these cases, the lower MIF applies.

(6) Regression Rules. Regression rules allow for uneven progress through training. Regression rules do not apply to the first simulator or flight block in each stage. Regression is defined as performance below the previous block MIF.

(a) When a specific maneuver/procedure is introduced for the first time in a block, previous block MIF does not exist. Regression rules do not apply.

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

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

2. The maneuver was not flown on a check ride/safe-for-solo event.

3. The instructor is satisfied the student is ready to progress to the next event.

(c) The instructor must award an overall unsatisfactory if:

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

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

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

(7) 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. When a maneuver is performed multiple times in a block of training, the last grade assigned for the maneuver will determine if the student meets EOB MIF.

(b) Optional Items. Items with a number, but without a plus (+), are optional. However, if flown, the student must meet the required proficiency by EOB.

(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.

(8) 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. This assessment shall be used for flight events and warmup events. 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 1.3-hour training period.

c. Policies for Evaluation Flights and Ground Evaluations

(1) Authorized Evaluators. The squadron commander shall 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 reattempt 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 reattempt maneuvers at the check pilot's discretion.

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

1. Any (+) 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:

- 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.

NOTE: Regardless of above exceptions, mission profile/critical items shall be accomplished to the maximum extent possible.

(c) Formation EOB SFS Failure. If the student fails a Formation stage EOB SFS because of unsatisfactory pattern/landing not directly related to the Formation stage, any subsequent ET event may be flown as a Contact event and the resulting progress check may also be a Contact event.

(d) Unsatisfactory Check Ride—Ground Operations. A check ride graded unsatisfactory solely for ground operations requires a progress check. The Operations Officer shall 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 MPTS *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 ATF for the failed event generating the progress check.

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 or second academic test failure generates an IPC. A subsequent RRU or academic test failure generates an FPC.

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

1. Criteria for IPC are:

- a. Failed check ride.
- b. Two consecutive or three cumulative unsatisfactory events in the same block, not including XX87 events.
- c. Following an RRU.
- d. Following two academic test failures.

2. Operations Officer or above directed when the student's potential to complete MPTS is in doubt.

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 designated in writing, usually a designated STAN pilot, shall administer the IPC. The IPC shall not be administered by the student's on-wing or the instructor that generated the UNSAT. A qualified IPC IP check pilot shall monitor an IPC conducted in a simulator. The squadron IPC IP is responsible for making a "return to training" or "continue the elimination process" recommendation to the Squadron CO.

(c) FPC. The following defines when to conduct an FPC, FPC outcomes, and FPC IP check pilots.

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.

c. Commanding Officer-directed FPC when the student's potential to complete MPTS and advanced training is in doubt (see paragraph 8d, failure to meet specific goals of SMS). Completion of the training syllabus does not guarantee progression to advanced training. For students who meet minimum standards at the completion of primary training, attrition or an FPC may be required as directed by CNATRAINST 1500.4G.

2. Outcomes are:

a. Passing returns the student to normal syllabus flow.

b. Failing results in an attrition recommendation by the CO to the TRAWING commander and a subsequent TRB.

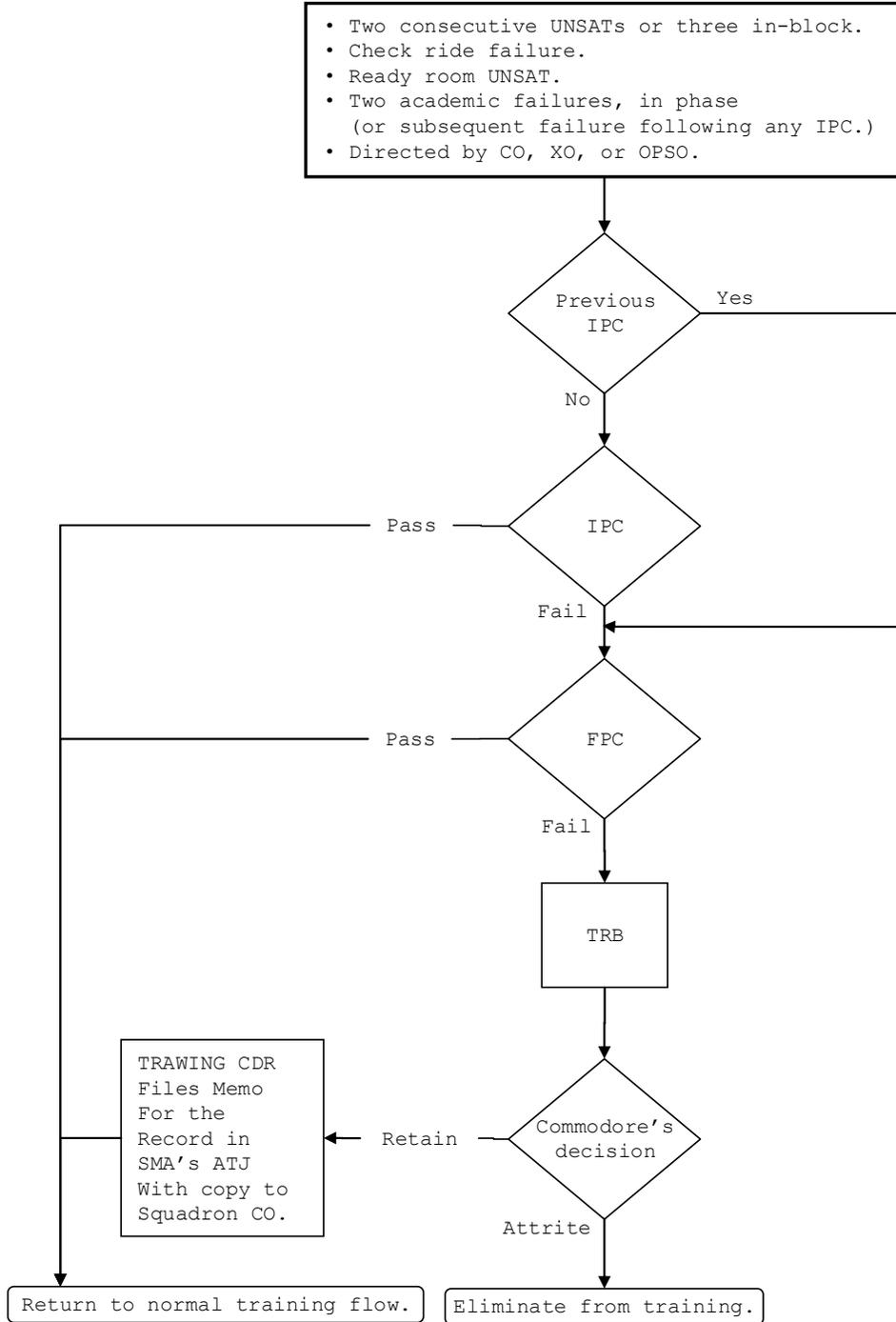
3. FPC IPs. The CO, XO, or a CO-designated representative administers the FPC. It is the intent of CNATRA that wherever possible, the CO, or in his absence, the XO, shall conduct FPCs. In the event that neither the CO nor XO are qualified or available to instruct in the required stage, the CO may designate, in writing, a senior officer (O-4 or above) to conduct the FPC by direction. The FPC shall not be administered by the student's on-wing or the instructor that generated the UNSAT. 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/retention recommendation to the COMTRAWING.

d. Progress Check Counseling

(1) Prior to an Initial Progress Check. The student's Flight Leader, Flight Instructor, 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 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.

MPTS PROGRESS CHECK TRAINING REVIEW PROCESS



11. Special Instructions and Restrictions

a. Flight Hour/Event Requirements and Restrictions

(1) Programmed Hours and Events. Syllabus-programmed flight hours are 89.0 hours. Event lengths, SXX86, 87, 88, and 89 events will cause variation. Accomplish all syllabus events.

(2) Minimum Night Hours: 10.0 hours.

(3) Minimum Solo Hours: 6.0 hours.

(4) Minimum Instrument Hours (Actual or Simulated):
28.0 hours.

(5) Maximum Daily Student Activities (Aircraft, Simulator, or Academic). Students shall not exceed three flight, simulator or exam events during one duty day or three graded activities during cross-country flights (maximum two hooded Instrument events). Computer-aided Instruction (CAI) is self-paced and does not count toward the total number of student activities. Academic ground training is limited to 8 Hrs/Day IAW CNATRAINST 1500.4G.

(6) Minimum Student Turn-Times. The student must have at least 30 minutes between debriefing one event and briefing a follow-on solo event. 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 paper work. 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. After six consecutive scheduled days, students shall receive a minimum of one day off.

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. Solo Restrictions

(1) Documentation. The ATF for the event preceding the solo event must include "Safe for Solo" or "Not Safe for Solo" in the general comments section.

(2) Solo Not Permitted. The student may not fly solo unless the appropriate ATF states "Safe for Solo."

(3) Airsickness. A student who has been actively or passively airsick within the previous event may not fly solo. Where available, use syllabus events to fulfill this requirement. Otherwise, use adaptation events.

(4) Maneuvers Allowed. Solos may only perform maneuvers graded F/3 or better on the previous event.

(5) Maneuvers Not Allowed. Solos may not perform spins, stalls, split-S, Immelmann, combination maneuver, simulated emergency procedures, or any maneuver not previously introduced.

(6) Currency. Students shall not fly solo unless they have had their safe-for-solo flight within the preceding five calendar days.

(7) Daylight Restriction. Solo students shall not fly solo earlier than sunrise or later than 30 minutes before sunset.

(8) Brief. The Flight/Operations Duty Officer shall brief the solo student. The flight briefing must cover mission profile, objectives, and contingencies.

e. Aircraft/Simulator Interchangeability. Simulator events may be substituted in the T-34C when the IFT 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	Preflight Ground Training	20	31.0	See Below

1. Events

G0101	Admin	Check-In. Students will check in with the Wing, Ground School, and Squadron. This block includes Publications Issue.		5.5	ASI
G0102	MIL	Bailout Lecture		1.0	ASI
G0103	BOT	Bailout Trainer		1.0	ASI
G0104	Lect	Preflight Demo. Includes Flight Gear Fitting.		3.0	ASI
G0105	CAI	Introduction to Emergency Procedures		0.5	EMFP
G0106	CAI	Ground Emergencies		1.0	EMFP
G0107	CAI	Takeoff Emergencies		1.0	EMFP
G0108	CAI	In-Flight Emergencies		1.5	EMFP
G0109	CAI	Landing Emergencies		1.0	EMFP
G0110	CAI	Bailout and Ditching		1.0	EMFP
G0111	CAI	Practice EP Exam		1.0	EMFP
G0112	CAI	Emergency Procedures Exam Test		1.0	EMFP
G0113	MIL	Aviation Safety Program		1.0	ASI
G0114	MIL	GLOC/GTIP		1.0	ASI
G0115	Lect	Airsickness Awareness		1.0	ASI
G0116	MIL	Course Rules		5.0	CR
G0117	CAI	Course Rules Exam Test		1.0	CR
G0118	MIL	Wheels Watch		2.0	ASI
G0119	MIL	MPTS Brief		1.0	ASI
G0120	Sqdn	Checkout		0.5	ASI

2. Syllabus Notes

- a. Complete F4203, N4102, N4002, and I4390 prior to G0120.
- b. Complete G0101 prior to G0102, G0104, G0105, G0113, G0114, G0115, G0116, G0118, and G0119.
- c. Complete G0102 prior to G0103.
- d. Complete G0105-11 in order prior to G0112.
- e. Complete G0116 prior to G0117.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
G10	Class	Preflight Ground Training	6	26.5	See Below

1. Events

G1001	Lect	T-34C Aircraft Systems Day 1		7.0	SYS
G1002	Lect	T-34C Aircraft Systems Day 2		7.0	SYS
G1003	Lect	T-34C Aircraft Systems Day 3		7.0	SYS
G1004	Lect	T-34C Aircraft Systems Review		2.0	SYS
G1005	CAI Test	T-34C Aircraft Systems Exam		1.5	SYS
G1006	MIL	Crew Resource Management		2.0	ASI

2. Syllabus Notes

a. Complete G0101 prior to G1001 and G1006.

b. Complete G1001-5 in order.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C01	Class	Contact Ground Training	11	6.2	See Below

1. Events

C0101	CAI	Fundamental Skills and Knowledge		0.5	DCONF
C0102	CAI	Fundamental Flight Procedures		0.4	DCONF
C0103	CAI	Stalls and Spins		0.5	DCONF
C0104	CAI	Precautionary Emergency Landings		0.3	DCONF
C0105	CAI	Power Loss Procedures		0.3	DCONF
C0106	MIL	Contact Flight Procedures Lecture		0.5	DCONF
C0107	CAI	Introduction to Aerobatics		1.0	DCONF
C0108	CAI	Aerobatic Maneuvers		1.2	DCONF
C0109	CAI	AOA Approaches		0.5	DCONF
C0110	CAI	Combination Aerobatic Maneuvers		0.5	DCONF
C0111	CAI	Night Contact Flight Procedures		0.5	NCONF

2. Syllabus Notes

- a. Complete G0101 prior to C0101, C0106, C0107, and C0111.
- b. Complete C0101-5 in order.
- c. Complete C0107-10 in order.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C02	Class	Safe-for-Solo	2	2.0	SFS

1. Events

C0201	MIL	Safe-for-Solo		1.0	
C0202	CAI	Safe-for-Solo Exam Test		1.0	

2. Syllabus Notes

- a. Complete G0101 prior to C0201.
- b. Complete C0201 prior to C0202.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C10	Class	Flight Indoctrination	1	3.0	ASI

1. Events

C1001 Sqdn Flight Indoctrination 3.0
(FAM-0)

2. Syllabus Note. Complete C2005 prior to C1001.

3. Discuss Items

C1001

Scheduling/snivels, brief, debrief, ATS, ATF, flight gear check, CMU-33A/P survival gear, aircraft issue, WINFLIR/EFLIR, MAF, SSRs, headwork, BAW, procedures, EPs, information resources, tower visit (time permitting), DOR/TTO policy, weight and balance. Preflight, postflight, and cockpit indoctrination (to include strapping in, helmet hookup, donning and operation of oxygen mask), and update NATOPS and NATOPS Pocket Checklist.

Block	Media	Title	Events	Hrs	Stage
I01	Class	Instrument Ground Training	4	4.0	BIFP

1. Events

I0101	CAI	BIFP 1		1.0	
I0102	CAI	BIFP 2		1.0	
I0103	CAI	BIFP 3		1.0	
I0104	CAI	BIFP 4		1.0	

2. Syllabus Notes

- a. Complete G0101 prior to I0101.
- b. Complete I0101-4 in order.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
I02	Class	Instrument Ground Training	44	56.0	See Below

1. Events

I0201	CAI	METAR Weather Reports		1.0	METRO
I0202	CAI	TAFs		1.0	METRO
I0203	CAI	Surface Analysis and Prognostic Charts		1.0	METRO
I0204	CAI	Radar Products, Satellite Imagery		1.0	METRO
I0205	MIL	Meteorology Flight Planning Lecture Part 1		1.5	METRO
I0206	CAI	Hazardous Weather and Area Forecasts		1.0	METRO
I0207	CAI	In-Flight Weather Advisories		1.0	METRO
I0208	CAI	Winds Aloft Prognostic Chart		1.0	METRO
I0209	CAI	DD 175-1		1.5	METRO
I0210	MIL	Meteorology Flight Planning Lecture Part 2		1.5	METRO
I0211	CAI	Meteorology Exam Test		1.5	METRO
I0212	CAI	General Planning (GP)		0.3	IFR
I0213	CAI	GP Chapter 5		0.3	IFR
I0214	CAI	Area Planning (AP)		0.4	IFR
I0215	CAI	AP-1A and AP-1B		0.3	IFR
I0216	CAI	Flight Information Handbook		0.3	IFR
I0217	CAI	IFR Supplemental		0.4	IFR
I0218	Lab	P305 CH 1/2		1.0	IFR
I0219	Lab	P305 CH 3/4		0.5	IFR

Events continued on next page.

1. Events Cont

I0220	MIL	COMM/NAV/RIOT	2.5	IFR
I0221	MIL	FLIP Pubs/Holding	2.5	IFR
I0222	CAI	FLIP 7	0.3	IFR
I0223	CAI	FLIP 8	0.3	IFR
I0224	CAI	FLIP 9	0.3	IFR
I0225	CAI	FLIP 10	0.3	IFR
I0226	CAI	FLIP 11	0.4	IFR
I0227	CAI	FLIP 12	0.4	IFR
I0228	Lect	CBT Review	0.5	IFR
I0229	MIL	FLIP Pubs 2 - Low-Altitude U.S.	1.0	IFR
I0230	RIOT	RIOT 2	0.5	IFR
I0231	MIL	OPNAVINST 3710	3.0	IFR
I0232	Lab	P305 CH 5/6	1.0	IFR
I0233	MIL	Flight Planning	3.0	IFR
I0234	Lab	Practice Problem 1	3.0	IFR
I0235	Lab	P305 CH 7/8	1.0	IFR
I0236	Lab	Practice Problem 2	2.0	IFR
I0237	MIL	Communications	2.0	IFR
I0238	Lab	Practice Problem 3	2.5	IFR
I0239	Lab	Practice Problem 4	2.0	IFR
I0240	Lab	Practice Problem 5	2.0	IFR
I0241	Lect	Review	0.5	IFR
I0242	Lab	Pretest	3.0	IFR
I0243	Lect	Review Pretest	2.5	IFR
I0244	CAI	End-of-Course Exam Test	3.0	IFR

2. Syllabus Notes

- a. Students enrolled in I0212-44 shall not be allowed to fly any event nor stand duty.
- b. Complete G0101 prior to I0201.
- c. Complete I0201-11 in order.
- d. Complete I0211 prior to I0212, I0218, I0220, I0221, I0230, I0231, I0233, and I0237.
- e. Complete I0212-17 in order prior to I0222.
- f. Complete I0218-19 in order prior to I0232, which will be prior to I0235.
- g. Complete I0221 prior to I0229.
- h. Complete I0233-34 in order prior to I0236.
- i. Complete I0236 prior to I0238 and complete I0238-40 in order.
- j. Complete I0222-28 (in order), I0235, I0229, I0230, I0240, I0220, I0231, and I0237 prior to I0241.
- k. Complete I0241-44 in order.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
I03	Class	Instrument Ground Training	9	18.0	See Below

1. Events

I0301	MIL	RI Concepts		2.0	RIFP
I0302	CAI	NAVAID Positioning		1.3	RIFP
I0303	CAI	Holding		1.1	RIFP
I0304	MIL	RIFP I, Part 1		3.0	RIFP
I0305	CAI	TACAN Point-to-Point		1.3	RIFP
I0306	CAI	TACAN Arcing		1.3	RIFP
I0307	MIL	RIFP I, Part 2		3.0	RIFP
I0308	CAI	GPS Procedures/Flight Planning Problems		2.0	GPSFP
I0309	MIL	RIFP II		3.0	RIFP

2. Syllabus Notes

- a. Complete G0101 prior to I0301.
- b. Complete I0301 prior to I0302, I0303, I0305, I0306, and I0308.
- c. Complete I0302-3 (any order) prior to I0304.
- d. Complete I0304 and I0305-6 (any order) prior to I0307.
- e. Complete I0307 and I0308 prior to I0309.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
N01	Class	Navigation Ground Training	9	7.0	NAVFP

1. Events

N0101	CAI	Introduction to Charts		0.5	
N0102	CAI	FAR I		0.5	
N0103	CAI	FAR II		0.5	
N0104	CAI	Preflight Planning		0.5	
N0105	CAI	Visual Navigation Procedures		0.5	
N0106	CAI	Airport Operations		0.5	
N0107	CAI	Navigation Practical Exercise		2.0	
N0108	MIL	Navigation Flight Procedures		1.0	
N0109	CAI Test	Navigation Exam		1.0	

2. Syllabus Notes

- a. Complete G0101 prior to N0101 and N0108.
- b. Complete N0101-7 in order and N0108 prior to N0109.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
F01	Class	Formation Ground Training	2	5.0	FORMFP

1. Events

F0101	MIL	Formation Flight Procedures		4.0	
F0102	CAI Test	Formation Flight Procedures Exam		1.0	

2. Syllabus Notes

- a. Complete G0101 prior to F0101.
- b. Complete F0101 prior to F0102.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
F03	Class	Air Force Formation Ground Training	2	3.0	AFORMFP

1. Events

F0301	MIL	Air Force Formation Flight Procedures		2.0	
F0302	CAI Test	Air Force Formation Exam		1.0	

2. Syllabus Notes

- a. Complete the primary phase prior to F0301.
- b. Complete F0301 prior to F0302.

3. Discuss Items. None.

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Chapter III

Contact Training

1. Pre-solo Training Philosophy. The fundamental flight skills required of each student in order to safely solo in the T-34C are critical, not only to solo, but also to successfully complete MPTS. 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 pre-solo MIF does not require consistent student proficiency on the more complicated maneuvers until the instructional unit prior to solo, students must show continued improvement as they progress in training. Regardless of the end-of-block 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 using navigational aids in place of visual navigation.

4. Seating. Students shall occupy the front seat for all events in the stage.

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	C2005	C4004	C4104	C4204	C4390	C4401	C4507	C4602
1	General Knowledge/ Procedures		3+	3+	4+	4+	4	4+	4+
2	Emergency Procedures		3+	3+	4+	4+	4	4+	4+
3	Headwork/Situational Awareness		2+	3+	3+	3+	3	3+	3+
4	Basic Air Work		3+	4+	4+	4+	4	4+	3+
6	In-Flight Planning/ Area Orientation		2+	3+	3+	3+	3	3+	3+
7	In-Flight Checks		3+	3+	4+	4+	4	4+	3+
8	Radio Procedures		2+	3+	4+	4+	4	4+	3+
9	Ground Operations		3+	4+	4+	4+	4	4+	3+
10	Blindfold Cockpit Check	3+							
N	Prestart Checklist	3+							
N	Start Checklist	3+							
N	Abnormal Starts	3+							
N	Engine Fire on the Ground (Before Starter Off)	3+							
N	Engine Fire on the Ground (After Starter Off)	3+							
N	Pretaxi Checklist	3+							
N	Ground Runup	3+							
N	Takeoff Checklist	3+							
N	Aborted Takeoff	3+			3+				
N	Emergency Engine Shutdown	3+							

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C2005	C4004	C4104	C4204	C4390	C4401	C4507	C4602
11	Normal Takeoff		3+	4+	4+	4+	4	4+	4+
12	Departure		2+	3+	4+	4+	4	4+	4+
13	Trim		3+	4+	4+	4+	4		4+
14	VFR Scan		2+	3+	4+	4+	4	4+	3+
15	LSC		2+	3+			4		3
16	Turn Pattern		2+	3+	4		4		3
17	SFMCM		3+						
18	POS		2+	3+	4				
19	ATS		2+	3+	4+	4+		4+	
20	Spin			2+	3+	3+		4+	
33	Unusual Attitude Recovery (Nose-High)				3+	3+		4+	
34	Unusual Attitude Recovery (Nose-Low)				3+	3+		4+	
35	Unusual Attitude Recovery (Inverted)				3+	3+		4+	
N	Landing Checklist	3+							
N	Postlanding Checklist	3+							
N	Engine Shutdown Checklist	3+							
N	Abnormal ITT During Shutdown	3+							
N	Prop Feather (Unknown Cause)	3+							
N	Engine Fire (In Flight)	3+							
N	Engine Failure Over Water/Ditching	3+							
N	Fuel Control Rollback	3+							
N	Electrical/Unknown Origin Fire	3+							

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C2005	C4004	C4104	C4204	C4390	C4401	C4507	C4602
N	Restoring Electrical Power	3+							
N	Smoke or Fume Elimination	3+							
N	Fluctuating Oil (Low/High Oil Pressure or High Oil Temp)	3+							
N	Engine-Driven or Electrical Fuel Boost Pump Failure	3+							
N	Generator Failure	3+							
N	Inverter Failure	3+							
N	Bleed Air Warning	3+							
N	Torque Sensing Failure	3+							
N	Prop RPM Out of Limits	3+							
N	Unsafe Gear Indications	3+							
N	Chip Light	3+							
21	HAPL	3+		2+	3+	3+		3	
22	LAPL	3+		2+	3+	3+		3	
23	PPEL	3+		2+	3+	3+		3	3
36	Aileron Roll							3+	
37	Loop							3+	
38	Wingover							3+	
39	Barrel Roll							3+	
40	One-Half Cuban Eight							3+	
41	Split-S							3+	
42	Immelmann							3+	
43	Combination Maneuver							3+	
24	OLF Operations		2+	3+	4+	4+	4	4+	3

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C2005	C4004	C4104	C4204	C4390	C4401	C4507	C4602
26	Landing Pattern		2+	3+	4+	4+	4		3+
27	FFL		2+	3+	3+	3+	3	4+	3+
28	NFL		2	3+	3+	3+	3	4+	3
44	AOA Approach							3+	
30	PPEL/P			1	3+	3+		3+	
31	LAPL/P			1	3+	3+		3+	
29	Go Around/Waveoff		2	3+	4+	4+	4	4+	3+
25	VFR Straight-In Approach				3+			3	
32	Course Rules/HFE		2+	3+	3+	3+	3	4+	3+
	Special Syllabus Requirements	1	1	1	1	1		1	

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C20	CPT	Cockpit Procedure Training	5	0	6.5	1.3

1. Prerequisites

- a. G0104 (Preflight Demo).
- b. G0111 (Practice EP Exam).
- c. G0113 (Aviation Safety Program).
- d. G0119 (MPTS Brief).
- e. G1005 (Systems Exam).
- f. G1006 (CRM).

2. Syllabus Notes. The student will perform the following procedures on the indicated event:

C2001

Cockpit familiarization (to include strapping in; rudder pedal and seat adjustments; location of cockpit gauges, switches, and engine controls); prestart checklist; start checklist (include one GPU start); pretaxi checklist; ground runup checklist; takeoff checklist; landing checklist; postlanding checklist; engine shutdown checklist; voice reports; and procedures.

C2002

All normal operating procedures, abnormal starts, other start malfunctions (low starter RPM, zero oil pressure, fuel pump failure), engine fire on the ground (before starter off), engine fire on the ground (after starter off), emergency engine shutdown, aborted takeoff, and abnormal ITT during shutdown.

C2003

All normal operating procedures, prop feather (unknown cause), HAPL, LAPL, engine fire (in-flight), engine failure over water/ditching, and fuel control rollback.

C2004

All normal operating procedures, electrical/unknown origin fire, restoring electrical power, smoke or fume elimination, fluctuating oil pressure (low/high oil pressure or high oil temperature), engine-driven or electric (standby) fuel boost pump failure, prop RPM out of limits, unsafe gear indications, chip light, and PPEL.

C2005

All normal operating procedures, generator failure, inverter failure, torque sensing system failure, and bleed air warning light.

3. Special Syllabus Requirements

C2001

Demonstrate CPT/SIM console operation (per local instructions).

4. Discuss Items

C2001

CPT curriculum, student responsibilities for future CPT events, filling out ATFs, grading procedures, and conduct of event.

C2002

All introduced items and conduct of event.

C2003

All introduced items and conduct of event.

C2004

All introduced items and conduct of event.

C2005

All introduced items and conduct of event.

5. Block MIF

CTS REF	MANEUVER	C2005
10	Blindfold Cockpit Check	3+
N	Prestart Checklist	3+
N	Start Checklist	3+
N	Abnormal Starts	3+
N	Engine Fire on the Ground (Before Starter Off)	3+
N	Engine Fire on the Ground (After Starter Off)	3+
N	Pretaxi Checklist	3+
N	Ground Runup	3+
N	Takeoff Checklist	3+
N	Aborted Takeoff	3+
N	Emergency Engine Shutdown	3+
N	Landing Checklist	3+
N	Postlanding Checklist	3+
N	Engine Shutdown Checklist	3+
N	Abnormal ITT During Shutdown	3+
N	Prop Feather (Unknown Cause)	3+
N	Engine Fire (In Flight)	3+
N	Engine Failure Over Water/Ditching	3+
N	Fuel Control Rollback	3+
N	Electrical/Unknown Origin Fire	3+
N	Restoring Electrical Power	3+
N	Smoke or Fume Elimination	3+
N	Fluctuating Oil (Low/High Oil Pressure or High Oil Temp)	3+
N	Engine-Driven or Electric Fuel Boost Pump Failure	3+
N	Generator Failure	3+
N	Inverter Failure	3+

MIF continued on next page.

CTS REF	MANEUVER	C2005
N	Bleed Air Warning	3+
N	Torque Sensing Failure	3+
N	Prop RPM Out of Limits	3+
N	Unsafe Gear Indications	3+
N	Chip Light	3+
21	HAPL	3+
22	LAPL	3+
23	PPEL	3+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C40	T-34	Day Contact	4	0	6.4	1.6

1. Prerequisites

- a. C0103 (Stalls and Spins).
- b. C0106 (Contact Flight Procedures Lecture).
- c. C1001 (FAM-0).
- d. G0103 (Bailout Trainer).
- e. G0112 (EP Exam).
- f. G0114 (GLOC/GTIP).
- g. G0115 (Airsickness Awareness).
- h. G0117 (Course Rules Exam).
- i. G0118 (Wheels Watch).

2. Syllabus Notes

a. The C40 block will not count in student ranking or for track selection. The purpose of the first block is to motivate the student for the Primary phase of training and to provide each student with an opportunity to observe and to adapt to the military flight environment.

b. Additionally, instructors will provide each student with ample opportunity to practice basic maneuvers such as turns, changes of airspeed, use of trim, etc.

c. The student should perform the following procedures on the indicated event:

C4001

Emergency landing gear extension and GPU start.

3. Special Syllabus Requirements

C4001

NACWS operation and VHF radio operation.

C4002

Aborted takeoff demo.

C4003

ALDIS lamp signals and waveoff lights.

4. Discuss Items

C4001

GPU start, abnormal starts, residual engine fire on shutdown, brake failure, strike of ground object, emergency landing gear extension, see-and-avoid principle, cloud clearances, bailout, I'M SAFE checklist, basic transitions, land ASAP (NATOPS), land as soon as practical (NATOPS), and Notes, Warnings, and Cautions (NATOPS).

C4002

Tire failures; aborted takeoff; instrument, gas, and position reports (IGP); and sandbag syndrome/copilot responsibilities/CRM.

C4003

Lost communication procedures, ALDIS lamp signals and waveoff lights, electrical system malfunctions, and landing pattern.

C4004

Fuel system malfunctions/fuel balancing, crosswind takeoff/approach/landing, ballooning in the flare, and porpoise landings.

5. Block MIF

CTS REF	MANEUVER	C4004
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	2+
4	Basic Air Work	3+
6	In-Flight Planning/Area Orientation	2+
7	In-Flight Checks	3+
8	Radio Procedures	2+
9	Ground Operations	3+
11	Normal Takeoff	3+
12	Departure	2+
13	Trim	3+
14	VFR Scan	2+
15	LSC	2+
16	Turn Pattern	2+
17	SFMCM	3+
18	POS	2+
19	ATS	2+
24	OLF Operations	2+
26	Landing Pattern	2+
27	FFL	2+
28	NFL	2
29	Go Around/Waveoff	2
32	Course Rules/HFE	2+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C41	T-34	Day Contact	4	0	7.6	1.9

1. Prerequisites

- a. C4004.
- b. C0105 (Power Loss Procedures).

2. Syllabus Note. A student shall fly three events within C4102 and C4202 off-wing.

3. Special Syllabus Requirements

C4101
Skidded turn stall.
Slip.

C4102
Feather while airborne.

4. Discuss Items

C4101
Engine operating limitations, engine failure indications, ELP interception technique, T-34C glide characteristics, emergency voice reports, and spin.

C4102
Oil system failure; torque sensing system failure; chip light; and fires (ground and in flight).

C4103
G-awareness, OCF recovery, LAPL/P, and low altitude landing site selection.

C4104
Hard landings, gear emergencies, flap failures, and emergency orbit (delta) pattern.

5. Block MIF

CTS REF	MANEUVER	C4104
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	3+
7	In-Flight Checks	3+
8	Radio Procedures	3+
9	Ground Operations	4+
11	Normal Takeoff	4+
12	Departure	3+
13	Trim	4+
14	VFR Scan	3+
15	LSC	3+
16	Turn Pattern	3+
18	POS	3+
19	ATS	3+
20	Spin	2+
21	HAPL	2+
22	LAPL	2+
23	PPEL	2+
24	OLF Operations	3+
26	Landing Pattern	3+
27	FFL	3+
28	NFL	3+
30	PPEL/P	1
31	LAPL/P	1
29	Go Around/Waveoff	3+
32	Course Rules/HFE	3+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C42	T-34	Day Contact	4	0	8.0	2.0

1. Prerequisites

- a. C4104.
- b. C0201 (SFS) prior to C4201.
- c. C0202 (SFS Exam) prior to C4204.

2. Syllabus Notes

- a. General. A student shall fly three events within C4102 and C4202 off-wing.
- b. The student shall proficiently demonstrate a NATOPS brief.
- c. C4202. Student dons oxygen mask in flight.
- d. C4203. Student does aborted takeoff.
- e. Unusual Attitude Recoveries. The instructor will instruct and enter unusual attitudes from normal contact maneuvers. Students must be able to associate cause and effect of unusual attitude situations and apply proper recovery techniques. The IP shall demonstrate proper lap belt tightening for unusual attitude maneuvers.

3. Special Syllabus Requirements

C4201
Unusual attitude recovery (nose-high, nose-low, inverted).

C4202
Use of EPL.

C4203
VFR straight-in approach.

C4204
Securing rear cockpit.

4. Discuss Items

C4201

Compressor stall, uncontrollable power, anti-G strain maneuver, and unusual attitude recoveries (nose-high, nose-low, inverted).

C4202

Loss of useful power, use of EPL, and propeller failures.

C4203

Smoke or fumes elimination, aborting/landing on wet runway, and VFR wide or straight-in approaches.

C4204

Ditching, airborne damaged aircraft, OCF recovery procedures, C4390 preparation, securing rear cockpit, and CMU-33A/P survival gear.

5. Block MIF

CTS REF	MANEUVER	C4204
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	3+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
N	Aborted Takeoff	3+
11	Normal Takeoff	4+
12	Departure	4+
13	Trim	4+
14	VFR Scan	4+
16	Turn Pattern	4
18	POS	4
19	ATS	4+
20	Spin	3+
33	Unusual Attitude Recovery (Nose-High)	3+
34	Unusual Attitude Recovery (Nose-Low)	3+
35	Unusual Attitude Recovery (Inverted)	3+
21	HAPL	3+
22	LAPL	3+
23	PPEL	3+
24	OLF Operations	4+
26	Landing Pattern	4+
27	FFL	3+
28	NFL	3+
30	PPEL/P	3+

MIF continued on next page.

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CTS REF	MANEUVER	C4204
31	LAPL/P	3+
29	Go Around/Waveoff	4+
25	VFR Straight-In Approach	3+
32	Course Rules/HFE	3+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C43	T-34	Day Contact Check Ride	1	0	2.0	2.0

1. Prerequisite. C4204 and I4003.
2. Syllabus Notes. The student shall satisfactorily secure the rear cockpit and shall demonstrate satisfactory knowledge of local area procedures, prominent landmark identification, local area hazards, and lost aircraft procedures.
3. Special Syllabus Requirements. Complete weight and balance.
4. Discuss Items

C4390

Any previously discussed items, unauthorized solo maneuvers, lost aircraft procedures, unintentional instrument flight, local course rules, and emergency procedures.

5. Block MIF

CTS REF	MANEUVER	C4390
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	3+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
11	Normal Takeoff	4+
12	Departure	4+
13	Trim	4+
14	VFR Scan	4+

MIF continued on next page.

CTS REF	MANEUVER	C4390
19	ATS	4+
20	Spin	3+
33	Unusual Attitude Recovery (Nose-High)	3+
34	Unusual Attitude Recovery (Nose-Low)	3+
35	Unusual Attitude Recovery (Inverted)	3+
21	HAPL	3+
22	LAPL	3+
23	PPEL	3+
24	OLF Operations	4+
26	Landing Pattern	4+
27	FFL	3+
28	NFL	3+
30	PPEL/P	3+
31	LAPL/P	3+
29	Go Around/Waveoff	4+
32	Course Rules/HFE	3+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C44	T-34	Initial Contact Solo	0	1	1.5	1.5

1. Prerequisite. C4390.
2. Syllabus Notes. The student should accomplish four touch-and-go landings and may only accomplish maneuvers listed in the MIF table.
3. Special Syllabus Requirements. None.
4. Discuss Items
C4401
IAW ODO/FDO solo brief.

5. Block MIF

CTS REF	MANEUVER	C4401
1	General Knowledge/Procedures	4
2	Emergency Procedures	4
3	Headwork/Situational Awareness	3
4	Basic Air Work	4
6	In-Flight Planning/Area Orientation	3
7	In-Flight Checks	4
8	Radio Procedures	4
9	Ground Operations	4
11	Normal Takeoff	4
12	Departure	4
13	Trim	4
14	VFR Scan	4
15	LSC	4
16	Turn Pattern	4
24	OLF Operations	4
26	Landing Pattern	4
27	FFL	3
28	NFL	3
29	Go Around/Waveoff	4
32	Course Rules/HFE	3

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C45	T-34	Day Contact	4	3	12.6	1.8

1. Prerequisites

- a. C0110 (Combination Aerobatic Maneuvers).
- b. C4401.

2. Syllabus Notes

a. General. The stage emphasizes aerobatics and AOA approaches; however, the student shall maintain proficiency in Contact stage maneuvers.

b. Unusual Attitude Recoveries. The instructor will instruct and enter unusual attitudes from normal aerobatic maneuvers. Students must be able to associate cause and effect of unusual attitude situations and apply proper recovery techniques.

c. ELP. Student's ability to fly the ELP can be demonstrated with either a PPEL, HAPL, or LAPL. A minimum of one complete ELP must be flown.

d. ATFs. The IP must state "Safe for Solo" or "Not Safe for Solo" in the general comments section of each dual ATF.

e. Solos

(1) Three events shall be solo.

(2) The SNA may not fly two solos in succession.

(3) The SNA may only perform maneuvers graded F/3 or better on the preceding flight.

(4) The SNA may not perform AOA approach, split-S, Immelmann, inverted flight, or combination maneuver.

(5) The SNA must meet 3+ for unusual attitude recoveries and landings prior to first solo but must meet MIF by second solo.

(6) In order to fly C4507 solo, the SNA must have met EOB MIF on C4506.

3. Special Syllabus Requirements

C4501

Inverted flight.

4. Discuss Items

C4501

Aerobatics, OCF recovery procedures, VFR unusual attitudes (IAW NATOPS), precision landings, AOA approaches, inverted flight, airborne damaged aircraft, maneuvering speed, and anti-G straining maneuver.

C450X

Second dual event: split-S, Immelmann, and one-half Cuban eight.

Fourth dual event: combination maneuvers and any EP.

5. Block MIF

CTS REF	MANEUVER	C4507
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	3+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
11	Normal Takeoff	4+
12	Departure	4+
14	VFR Scan	4+
19	ATS	4+
20	Spin	4+

MIF continued on next page.

CTS REF	MANEUVER	C4507
33	Unusual Attitude Recovery (Nose-High)	4+
34	Unusual Attitude Recovery (Nose-Low)	4+
35	Unusual Attitude Recovery (Inverted)	4+
21	HAPL	3
22	LAPL	3
23	PPEL	3
36	Aileron Roll	3+
37	Loop	3+
38	Wingover	3+
39	Barrel Roll	3+
40	One-Half Cuban Eight	3+
41	Split-S	3+
42	Immelmann	3+
43	Combination Maneuver	3+
24	OLF Operations	4+
27	FFL	4+
28	NFL	4+
44	AOA Approach	3+
30	PPEL/P	3+
31	LAPL/P	3+
29	Go Around/Waveoff	4+
25	VFR Straight-In Approach	3
32	Course Rules/HFE	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
C46	T-34	Night Contact	2	0	3.0	1.5

1. Prerequisites

- a. C0111 (NCONFP).
- b. C4401.

2. Syllabus Notes

- a. C4601. The student shall practice identifying local landmarks, estimating distances, and using NAVAIDS.
- b. Initial takeoff shall be no earlier than 30 minutes after official sunset.
- c. Each event shall be at least 1.4 hours.
- d. Landing-lights-out landing can be demonstrated as an optional maneuver.

3. Special Syllabus Requirements. None.

4. Discuss Items

C4601

Lost aircraft procedures, night emergency procedures, and night flight physiology.

C4602

Generator failure and electrical system malfunctions.

5. Block MIF

CTS REF	MANEUVER	C4602
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	3+
6	In-Flight Planning/Area Orientation	3+
7	In-Flight Checks	3+
8	Radio Procedures	3+
9	Ground Operations	3+
11	Normal Takeoff	4+
12	Departure	4+
13	Trim	4+
14	VFR Scan	3+
15	LSC	3
16	Turn Pattern	3
23	PPEL	3
24	OLF Operations	3
26	Landing Pattern	3+
27	FFL	3+
28	NFL	3
29	Go Around/Waveoff	3+
32	Course Rules/HFE	3+

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Chapter IV

Instrument Training

1. General

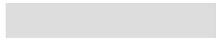
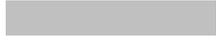
a. Low Altitude Approach Procedures. Within the I22 and I23 blocks, students shall accomplish a cross section of low altitude approach procedures.

b. Real World Problems in Simulator Training. Once required proficiency is achieved in the I23 block, challenge the student by including real world problems in combination with the instrument approach (360° turn on final, vectors off final, overshooting vectors to final, etc.).

c. Seating. Students shall occupy the rear cockpit, except during applicable I42 block events.

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

 Simulator/Device Event
 Check Ride Event

INSTRUMENT STAGE MANEUVER ITEM FILE											
CTS REF	MANEUVER	I2004	I2103	I4003	I2205	I2304	I4105	I2406	I2504	I4204	I4390
1	General Knowledge/ Procedures	3+	4+	4+	3+	4+	4+	4+	4+	4+	4+
2	Emergency Procedures	3+	4+	4+	3+	4+	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	2+	3+	2+	3+	3+	3+	3+	3+	4+	4+
4	Basic Air Work	3+	3+	4+	3+	3+	4+	4+	4+	4+	4+
5	Mission Planning					3+	4+	4+	4+	4+	4+
6	In-Flight Planning				2+	3+	3+	3+	3+	4+	4+
7	In-Flight Checks	2+	3+	3+	3+	4+	4+	4+	4+	4+	4+
8	Radio Procedures				3+	3+	3+	3+	3+	3+	3+
9	Ground Operations									4+	4+
11	Normal Takeoff									4	
12	Departure				2+	3+	4+	4+	4+	4+	4+
84	Use of ATIS/PMSV/FSS							3+	3+	4+	4
85	In-Flight Computations							3+	3+	4+	4
27	FFL									3	
28	NFL									3	
64	Enroute Procedures				3+	3+	4+	4+	4+	4+	4+
65	Point-to-Point					3+	3+	4+	4+	4+	4+
66	Arcing					3+	4+				
67	Climbs and Descents				2+	3+	4+	4+	4+	4+	4
48	CABT	3+	3	3							
49	Constant Airspeed Climbs	3+	3	4+							
50	Constant Rate Turns	3+	3+	4+							

MIF continued on next page.

INSTRUMENT STAGE MANEUVER ITEM FILE											
CTS REF	MANEUVER	I2004	I2103	I4003	I2205	I2304	I4105	I2406	I2504	I4204	I4390
51	Constant Rate Climbs and Descents	3+	3	4+							
52	Initial Climb to Altitude	2+	3+	4+							
53	S-1 Pattern	2+	3+	4+							
55	Penetration Maneuver	2+	3+	4+							
56	BAC Maneuver		3+	4+							
57	GCA Maneuver	2+	3+	4+							
68	Radial Intercepts				3+	4+	4				
69	Over the Station Intercept				3+	4+	4				
70	Station Passage				3+	4+					
71	VOR Holding				2+	3+	3+	4+	4+	4+	4
72	TACAN Holding					3+	3+	4+	4+	4+	4
86	Intersection Holding							4+	4+	4+	4
58	Approach Maneuver		3+	4+							
87	Class A Operations								4+	4	4
88	High Altitude Approach								3+	3	3
89	Localizer Approach							3+	3+	4+	4
73	Teardrop Approach				2+	3+	4+	4	4	4	4
74	Procedure Turn Approach				2+	3+	4+	4	4	4	4
75	Holding Pattern Approach				2+	3+	4+	4	4	4	4
76	Arcing Approach					3+	4+	4	4	4	4
77	Straight-In Approach					3+	4+	4	4	4	4
83	VOR/TACAN Final				2+	3+	4+				

MIF continued on next page.

INSTRUMENT STAGE MANEUVER ITEM FILE											
CTS REF	MANEUVER	I2004	I2103	I4003	I2205	I2304	I4105	I2406	I2504	I4204	I4390
59	Unusual Attitude (IMC)	2+	3+	3+							
60	Partial Panel (Straight and Level)		2+	3+							
61	Partial Panel (Timed Turns)		2+	3+							
62	Partial Panel (Enroute Descents)		2+	3+							
63	Partial Panel (Unusual Attitudes)		2+	2+							
79	PAR Approach					3+	3+	4+	4+	4+	4
90	ASR Approach							4+	4+	4+	4
80	No-Gyro GCA								2+	3+	3
91	GPS Holding								2+	3+	3
92	GPS RVFAC								2+	3+	3
93	GPS Missed Approach								2+	3+	3
54	Direct to a VOR/TACAN	3+	3+								
78	Circling Maneuver/Approach									3+	3
81	RVFAC				2+	3+	4+			4	4
82	Missed Approach				3+	3+	4+	4+	4+	4+	4
	Special Syllabus Requirements			1						1	

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I20	IFT	Basic Instruments	4	0	5.2	1.3

1. Prerequisites

- a. C4004.
- b. I0104 (BIFP 4).

2. Syllabus Notes

- a. Practice control and performance instrument flight.
- b. Devote I2001 to basic instrument maneuvers.

3. Special Syllabus Requirements. None.

4. Discuss Items

I2001

IFT checkout, attitude gyro, instrument lag, instrument scan/attitude cross checks, cockpit lighting, instrument checklist, radios tuned (peculiar to IFT), and unintentional instrument flight.

I2002

Fuel low-pressure light, direct to a VOR or TACAN, oil system failure, fuel control failures, and IND-350.

I2003

Unusual attitudes full panel.

I2004

Prop failures, unsafe gear indications, and bleed air warning light.

5. Block MIF

CTS REF	MANEUVER	I2004
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	2+
4	Basic Air Work	3+
7	In-Flight Checks	2+
48	CABT	3+
49	Constant Airspeed Climbs	3+
50	Constant Rate Turns	3+
51	Constant Rate Climbs and Descents	3+
52	Initial Climb To Altitude	2+
53	S-1 Pattern	2+
55	Penetration Maneuver	2+
57	GCA Maneuver	2+
59	Unusual Attitude (IMC)	2+
54	Direct to a VOR/TACAN	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I21	IFT	Basic Instruments	3	0	3.9	1.3

1. Prerequisite. I2004.
2. Syllabus Note. This block builds the student's cross-check and confidence.
3. Special Syllabus Requirements. None.
4. Discuss Items

I2101

Electrical fire (IMC) and smoke or fumes elimination.

I2102

Engine fire in flight and chip light.

I2103

Inverter failure, generator failure, gyro failure, partial panel, and limited use of magnetic (wet) compass.

5. Block MIF

CTS REF	MANEUVER	I2103
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	3+
7	In-Flight Checks	3+
48	CABT	3
49	Constant Airspeed Climbs	3
50	Constant Rate Turns	3+
51	Constant Rate Climbs and Descents	3
52	Initial Climb to Altitude	3+
53	S-1 Pattern	3+
55	Penetration Maneuver	3+
56	BAC Maneuver	3+
57	GCA Maneuver	3+
58	Approach Maneuver	3+
59	Unusual Attitude (IMC)	3+
60	Partial Panel (Straight and Level)	2+
61	Partial Panel (Timed Turns)	2+
62	Partial Panel (Enroute Descents)	2+
63	Partial Panel (Unusual Attitudes)	2+
54	Direct to a VOR/TACAN	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I40	T-34	Basic Instruments	3	0	4.5	1.5

1. Prerequisite. I2103.
2. Syllabus Note. Events flown during night conditions may be flown without the hood.
3. Special Syllabus Requirements

I4001

The instructor shall conduct a spatial disorientation demonstration.

I40XX

The instructor shall conduct one RVFAC maneuver and one PAR.

4. Discuss Items

I4001

Night preflight, oxygen use, hyperventilation and hypoxia, instrument checklist, instrument comparison check, rear cockpit bailout, scan/use of peripheral vision, flight characteristics above 10,000 feet, and sinus block.

I4002

Electrical/unknown origin fire, and electrical system malfunctions.

I4003

Icing, compressor stalls, and any EP.

5. Block MIF

CTS REF	MANEUVER	I4003
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	2+
4	Basic Air Work	4+
7	In-Flight Checks	3+
48	CABT	3
49	Constant Airspeed Climbs	4+
50	Constant Rate Turns	4+
51	Constant Rate Climbs and Descents	4+
52	Initial Climb to Altitude	4+
53	S-1 Pattern	4+
55	Penetration Maneuver	4+
56	BAC Maneuver	4+
57	GCA Maneuver	4+
58	Approach Maneuver	4+
59	Unusual Attitude (IMC)	3+
60	Partial Panel (Straight and Level)	3+
61	Partial Panel (Timed Turns)	3+
62	Partial Panel (Enroute Descents)	3+
63	Partial Panel (Unusual Attitudes)	2+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I22	IFT	Radio Instruments	5	0	6.5	1.3

1. Prerequisites

- a. C4401.
- b. I0307 (RIFP I, Part 2).
- c. I0244 (Instrument End-of-Course Exam).

2. Syllabus Notes

a. Emphasize previously learned instrument skills and instrument approaches.

b. VOR/TACAN final is graded as a separate maneuver to identify consistently substandard performance from FAF to MAP. Student deficiencies identified with a grade for VOR/TACAN final may be remediated on any approach with a depicted final approach course. The purpose of this grading clause is to eliminate the requirement to re-fly multiple-type approaches in order to remediate a common deficiency associated with the final approach segment.

3. Special Syllabus Requirements. None.

4. Discuss Items

I2201

Orientation on the RMI, use of the IND-350, and nonradar environment communications procedures.

I2202

Oil systems malfunction, timing adjustments—FAF to MAP, and VDP.

I2203

Prop failures.

I2204

Electrical failures.

I2205

Radar environment communications procedures.

5. Block MIF

CTS REF	MANEUVER	I2205
1	General Knowledge/Procedures	3+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	3+
6	In-Flight Planning	2+
7	In-Flight Checks	3+
8	Radio Procedures	3+
12	Departure	2+
64	Enroute Procedures	3+
67	Climbs and Descents	2+
68	Radial Intercepts	3+
69	Over the Station Intercept	3+
70	Station Passage	3+
71	VOR Holding	2+
73	Teardrop Approach	2+
74	Procedure Turn Approach	2+
75	Holding Pattern Approach	2+
83	VOR/TACAN Final	2+
81	RVFAC	2+
82	Missed Approach	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I23	IFT	Radio Instruments	4	0	5.2	1.3

1. Prerequisite. I2205.

2. Syllabus Notes

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

b. Practice instrument emergency procedures.

c. All approaches will be graded from IAF to FAF.

d. VOR/TACAN final is graded as a separate maneuver to identify consistently substandard performance from FAF to MAP. Student deficiencies identified with a grade for VOR/TACAN final may be remediated on any approach with a depicted final approach course. The purpose of this grading clause is to eliminate the requirement to refly multiple-type approaches in order to remediate a common deficiency associated with the final approach segment.

3. Special Syllabus Requirements. None.

4. Discuss Items

I2301-4

Flight planning (student shall submit a completed DD 175).

I2303

Glideslope intercept and OPNAVINST 3710.7T takeoff/approach minimums.

I2304

Lost communication procedures.

5. Block MIF

CTS REF	MANEUVER	I2304
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	3+
5	Mission Planning	3+
6	In-Flight Planning	3+
7	In-Flight Checks	4+
8	Radio Procedures	3+
12	Departure	3+
64	Enroute Procedures	3+
65	Point-to-Point	3+
66	Arcing	3+
67	Climbs and Descents	3+
68	Radial Intercepts	4+
69	Over the Station Intercept	4+
70	Station Passage	4+
71	VOR Holding	3+
72	TACAN Holding	3+
73	Teardrop Approach	3+
74	Procedure Turn Approach	3+
75	Holding Pattern Approach	3+
76	Arcing Approach	3+
77	Straight-In Approach	3+
83	VOR/TACAN Final	3+
79	PAR Approach	3+
81	RVFAC	3+
82	Missed Approach	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I41	T-34	Radio Instruments	5	0	9.0	1.8

1. Prerequisite. I2304.

2. Syllabus Notes

- a. On I4101 and I4102, emphasize VOR and TACAN procedures.
- b. Conditions permitting, the student shall fly holding, point-to-point, and at least three approaches on each event.
- c. The student shall accomplish at least four PAR approaches in the block.
- d. All approaches shall be graded from IAF to FAF.
- e. VOR/TACAN final is graded as a separate maneuver to identify consistently substandard performance from FAF to MAP. Student deficiencies identified with a grade for VOR/TACAN final may be remediated on any approach with a depicted final approach course. The purpose of this grading clause is to eliminate the requirement to re-fly multiple-type approaches in order to remediate a common deficiency associated with the final approach segment.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4101

Use of CDI, reverse sensing, radar environment communication procedures, and any EP.

I4102

Icing, groundspeed and true airspeed calculations, and any EP.

I4103

Electrical fire (IMC), flap failure, lost communication (local procedures/FIH), NATOPS fuel planning charts, and any EP.

I4104

Emergency field selection, glideslope interception, flight planning (submit a completed DD 175 and jet log: enroute holding delay), and any EP.

I4105

Fuel system malfunctions, unintentional thunderstorm penetration, enroute weather sources, flight planning (submit a completed DD 175 and jet log: terminal delay), and any EP.

5. Block MIF

CTS REF	MANEUVER	I4105
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
5	Mission Planning	4+
6	In-Flight Planning	3+
7	In-Flight Checks	4+
8	Radio Procedures	3+
12	Departure	4+
64	Enroute Procedures	4+
65	Point-to-Point	3+
66	Arcing	4+
67	Climbs and Descents	4+
68	Radial Intercepts	4
69	Over the Station Intercept	4
71	VOR Holding	3+
72	TACAN Holding	3+
73	Teardrop Approach	4+
74	Procedure Turn Approach	4+
75	Holding Pattern Approach	4+
76	Arcing Approach	4+
77	Straight-In Approach	4+
83	VOR/TACAN Final	4+
79	PAR Approach	3+
81	RVFAC	4+
82	Missed Approach	4+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I24	IFT	Instrument Navigation	6	0	7.8	1.3

1. Prerequisites

- a. I4105.
- b. I0309 (RIFP II).

2. Syllabus Notes

a. All simulators shall be real time locals with DD 175s required for all events in block.

b. Students shall meet or exceed these approach-type requirements:

Localizer	4
GCA	
PAR	2
ASR	1
TACAN	2
VOR	2

c. Students should attempt an approach brief prior to each approach.

3. Special Syllabus Requirements. None.

4. Discuss Items

I2401

Radar environment communications, approach brief, and lost communications (FIH).

I2402

Generator failure, intersection holding (dual NAVAID), and stopover flight planning.

I2403

Bailout, localizer approach, and localizer back course approach.

I2404

Fuel management and emergency field selection.

I2405

Electrical fire (IMC), and intersection holding (single NAVAID).

I2406

Any EP and airspeed and groundspeed calculations.

5. Block MIF

CTS REF	MANEUVER	I2406
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
5	Mission Planning	4+
6	In-Flight Planning	3+
7	In-Flight Checks	4+
8	Radio Procedures	3+
12	Departure	4+
84	Use of ATIS/PMSV/FSS	3+
85	In-Flight Computations	3+
64	Enroute Procedures	4+
65	Point-to-Point	4+
67	Climbs and Descents	4+
71	VOR Holding	4+
72	TACAN Holding	4+
86	Intersection Holding	4+
89	Localizer Approach	3+
73	Teardrop Approach	4
74	Procedure Turn Approach	4
75	Holding Pattern Approach	4
76	Arcing Approach	4
77	Straight-In Approach	4
79	PAR Approach	4+
90	ASR Approach	4+
82	Missed Approach	4+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I25	IFT	Instrument Navigation	4	0	5.2	1.3

1. Prerequisite. I2406.

2. Syllabus Notes

a. All simulators shall be real time out-and-ins with DD 175s are required for all events in block.

b. Students shall meet or exceed these approach-type requirements:

Localizer	2 (1 high altitude)
GCA	3 (One PAR, ASR, No-Gyro GCA)
TACAN	1 (high altitude)
GPS	2

3. Special Syllabus Requirements. None.

4. Discuss Items

I2501

Any EP and enroute weather update with PMSV/FSS.

I2502

Any EP and high altitude penetration/approach.

I2503

Any EP and enroute change of flight plan.

I2504

Any EP, GPS navigation, and GPS approach.

5. Block MIF

CTS REF	MANEUVER	I2504
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
5	Mission Planning	4+
6	In-Flight Planning	3+
7	In-Flight Checks	4+
8	Radio Procedures	3+
12	Departure	4+
84	Use of ATIS/PMSV/FSS	3+
85	In-Flight Computations	3+
64	Enroute Procedures	4+
65	Point-to-Point	4+
67	Climbs and Descents	4+
71	VOR Holding	4+
72	TACAN Holding	4+
86	Intersection Holding	4+
87	Class A Operations	4+
88	High Altitude Approach	3+
89	Localizer Approach	3+
73	Teardrop Approach	4
74	Procedure Turn Approach	4
75	Holding Pattern Approach	4
76	Arcing Approach	4
77	Straight-In Approach	4
79	PAR Approach	4+
90	ASR Approach	4+
80	No-Gyro GCA	2+
91	GPS Holding	2+
92	GPS RVFAC	2+
93	GPS Missed Approach	2+
82	Missed Approach	4+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I42	T-34	Instrument Navigation	4	0	8.0	2.0

1. Prerequisite. I2504.

2. Syllabus Notes

a. First two events in block shall be flown hooded from the rear cockpit. Events flown during night conditions may be flown without the hood.

b. I4201-I4204 should be flown in conjunction with an out-and-in or a cross-country flight. A minimum of one flight should be flown within the high altitude route structure. A minimum of one event should be flown at night.

c. Students shall meet or exceed these approach-type requirements. A minimum of 12 approaches is required for this block. At least one shall include a circling-to-land maneuver.

GCA	3 (One PAR, ASR, and No-Gyro)
Localizer	2
TACAN	2
VOR	1
GPS	1

d. Contact the IP prior to the flight or ODO if after hours to obtain guidance for the required flight plan.

e. Students should attempt an approach brief prior to each approach.

3. Special Syllabus Requirements

I4204

Complete DD 175-1 with NFWB.

4. Discuss Items

I4201

AC power failure, lost communication, radar environment voice reports, approach brief, bailout (IMC), and CRM.

I4202

Generator failure, circling approach/maneuvers, change of flight plan in flight, and enroute weather information.

I4203

Controlled/uncontrolled airspace, emergency field selection, severe weather detection/avoidance and lightning strike damage, and GPS approaches.

I4204

Fuel planning/management, descent planning, and high altitude penetration/approaches.

5. Block MIF

CTS REF	MANEUVER	I4204
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
6	In-Flight Planning	4+
7	In-Flight Checks	4+
8	Radio Procedures	3+
9	Ground Operations	4+
11	Normal Takeoff	4
12	Departure	4+
84	Use of ATIS/PMSV/FSS	4+
85	In-Flight Computations	4+
27	FFL	3
28	NFL	3

MIF continued on next page.

CTS REF	MANEUVER	I4204
64	Enroute Procedures	4+
65	Point-to-Point	4+
67	Climbs and Descents	4+
71	VOR Holding	4+
72	TACAN Holding	4+
86	Intersection Holding	4+
87	Class A Operations	4
88	High Altitude Approach	3
89	Localizer Approach	4+
73	Teardrop Approach	4
74	Procedure Turn Approach	4
75	Holding Pattern Approach	4
76	Arcing Approach	4
77	Straight-In Approach	4
79	PAR Approach	4+
90	ASR Approach	4+
80	No-Gyro GCA	3+
91	GPS Holding	3+
92	GPS RVFAC	3+
93	GPS Missed Approach	3+
78	Circling Maneuver/Approach	3+
81	RVFAC	4
82	Missed Approach	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
I43	T-34	Instrument Stage Check Ride	1	0	2.0	2.0

1. Prerequisite. I4204.

2. Syllabus Notes

a. A minimum of three approaches are required and should include:

(1) TACAN or VOR.

(2) GCA.

(3) Localizer.

b. Point-to-point is required.

c. Holding is required.

d. Contact the IP prior to the flight or ODO after hours to obtain guidance for the required flight plan.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4390

Lost communications (FIH), OPNAVINST takeoff/approach minimums, flight planning (submit a completed DD 175 and jet log: stopover plus enroute holding delay (1st leg), terminal delay (2nd leg)), NOTAMs, enroute weather, and any EP.

5. Block MIF

CTS REF	MANEUVER	I4390
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
6	In-Flight Planning	4+
7	In-Flight Checks	4+
8	Radio Procedures	3+
9	Ground Operations	4+
12	Departure	4+
84	Use of ATIS/PMSV/FSS	4
85	In-Flight Computations	4
64	Enroute Procedures	4+
65	Point-to-Point	4+
67	Climbs and Descents	4
71	VOR Holding	4
72	TACAN Holding	4
86	Intersection Holding	4
87	Class A Operations	4
88	High Altitude Approach	3
89	Localizer Approach	4
73	Teardrop Approach	4
74	Procedure Turn Approach	4
75	Holding Pattern Approach	4
76	Arcing Approach	4
77	Straight-In Approach	4
79	PAR Approach	4
90	ASR Approach	4
80	No-Gyro GCA	3

MIF continued on next page.

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CTS REF	MANEUVER	I4390
91	GPS Holding	3
92	GPS RVFAC	3
93	GPS Missed Approach	3
78	Circling Maneuver/Approach	3
81	RVFAC	4
82	Missed Approach	4

Chapter V

Navigation Training

1. Seating. The student should occupy the front seat for all events in stage.

2. Matrices. The following matrix is an overview of the entire Navigation stage. The purpose of this matrix is to provide the IUT 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

NAVIGATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	N4002	N4102
1	General Knowledge/Procedures	4+	4+
2	Emergency Procedures	4+	4+
3	Headwork/Situational Awareness	4+	4+
4	Basic Air Work	4+	4+
5	Mission Planning	3+	3+
6	In-Flight Planning	3+	3+
7	In-Flight Checks	4+	4+
8	Radio Procedures	3+	3+
9	Ground Operations	4+	4+
11	Normal Takeoff	4+	4+
12	Departure	4+	4+
84	Use of ATIS/PMSV/FSS	3	3
85	In-Flight Computations	4	4
27	FFL	3	3
28	NFL	3	3
45	VFR Course Maintenance	4+	4+
14	VFR Scan	4+	4+
46	VFR Arrival	3+	3+
47	VFR Pattern	3+	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
N40	T-34	Day Navigation	2	0	3.2	1.6

1. Prerequisites

- a. I4105.
- b. N0109 (Navigation Exam).

2. Syllabus Notes

a. Emphasis on N4001 shall be student navigation while the IP is at the controls. For all subsequent flights, the student may navigate and be at the controls.

b. Students shall submit completed VFR DD 175, jet log, and charts with preplanned routes. Contact the IP the day/night prior for route of flight. Do not interrupt crew rest.

c. VFR between 1000 and 3000 feet AGL. Plan to terminate with a precise ETA. Students will not use radio NAVAIDS or GPS. Students may only use a chart, visual references, speed, heading, and time.

3. Special Syllabus Requirements. None.

4. Discuss Items

N4001

VFR chart interpretation, emergency field selection, lost aircraft procedures, VFR field entry/departure, airspace classification, TOT and minimum fuel to continue, LAPL, any EP, and CRM.

N4002

Off-station operations and maintenance, VFR flight following, any EP, and CRM.

5. Block MIF

CTS REF	MANEUVER	N4002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	3+
6	In-Flight Planning	3+
7	In-Flight Checks	4+
8	Radio Procedures	3+
9	Ground Operations	4+
11	Normal Takeoff	4+
12	Departure	4+
84	Use of ATIS/PMSV/FSS	3
85	In-Flight Computations	4
27	FFL	3
28	NFL	3
45	VFR Course Maintenance	4+
14	VFR Scan	4+
46	VFR Arrival	3+
47	VFR Pattern	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
N41	T-34	Night Navigation	2	0	3.2	1.6

1. Prerequisites

- a. C4602.
- b. N4001.

2. Syllabus Notes. Night VFR between 2000 and 4500 feet AGL. Plan to terminate with a precise ETA. Students will not use radio NAVAIDS or GPS. Students may use only a chart, visual references, speed, heading, and time.

3. Special Syllabus Requirements. None.

4. Discuss Items

N4101

Night emergencies, night visual navigation techniques, and CRM.

N4102

Airfield lighting, any EP, and CRM.

5. Block MIF

CTS REF	MANEUVER	N4102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	3+
6	In-Flight Planning	3+
7	In-Flight Checks	4+
8	Radio Procedures	3+
9	Ground Operations	4+
11	Normal Takeoff	4+
12	Departure	4+
84	Use of ATIS/PMSV/FSS	3
85	In-Flight Computations	4
27	FFL	3
28	NFL	3
45	VFR Course Maintenance	4+
14	VFR Scan	4+
46	VFR Arrival	3+
47	VFR Pattern	3+

Chapter VI

Formation Training

1. General

a. Restrictions. Formation missions shall be flown as a section, except for solos with chase.

b. Landing Continuity. Maintain continuity in landing from the break pattern.

c. Seating. Students shall occupy the front seat for all events in the stage.

2. Matrices. The following matrix is an overview of the entire Formation stage, except the Air Force Formation block, F43. 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	F4005	F4101	F4203
1	General Knowledge/Procedures	4+	4	4+
2	Emergency Procedures	3+	3	3+
3	Headwork/Situational Awareness	3+	3	3+
4	Basic Air Work	4+	4	4+
6	In-Flight Planning/Area Orientation	4+	4	4+
7	In-Flight Checks	4+	4	4+
8	Radio Procedures	4+	4	4+
9	Ground Operations	4+	4	4+
14	VFR Scan	4+	4	4+
94	Visual Signals	4+	4	4+
	Special Syllabus Requirements			1

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	F4005	F4101	F4203
	FORMATION LEAD			
99	Wing Consideration	3+	3	3+
11	Normal Takeoff	4+	4	4+
12	Departure	3+	3	3+
95	Breakup and Rendezvous	3+	3	3+
120	Cruise Maneuvering			3+
121	Tail-Chase			3+
32	Course Rules/HFE	3+	3	
98	Section/Formation Approach	1		2+
	FORMATION WING			
100	Interval Takeoff/Running Rendezvous	3+	3	3
101	Section/Formation Takeoff			3+
108	Parade Position	3+	3	3+
103	VFR Turns Into	3+	3	
104	VFR Turns Away	3+	3	
105	45-Degree AOB Turns	2+		
104	IFR Parade Turns Away			3+
106	Crossunder	3+	3	3+
95	Breakup and Rendezvous	3+	3	3+
107	Underrun	3+	3	3
119	Cruise	2+		3+
120	Cruise Maneuvering			3+
121	Tail-Chase			3+
115	Lead Change	3+	3	3+
98	Section/Formation Approach			2+

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE				
CTS REF	MANEUVER	F4005	F4101	F4203
	MISCELLANEOUS			
21	HAPL	3		
22	LAPL	3		
23	PPEL	3		
30	PPEL/P	3+		
31	LAPL/P	3+		
26	Landing Pattern	3+	3	
27	FFL	3+	3	3
28	NFL	3+	3	3

Basic Formation Flight Training

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
F40	T-34	Basic Formation	5	0	10.5	2.1

1. Prerequisites

- a. C4401.
- b. F0102 (FORMFP Exam).

2. Syllabus Notes

a. General. On F4005, the IP must be satisfied the student can solo safely. If so, annotate the ATF with "Safe for Solo" under general comments. Otherwise, grade the event unsatisfactory and annotate the ATF with "Not Safe for Solo."

b. ELP. Student's ability to fly the ELP can be demonstrated with either a PPEL, HAPL, or LAPL. A minimum of one complete ELP must be flown.

c. Cruise position shall be flown on F4004 or F4005.

3. Special Syllabus Requirements. None.

4. Discuss Items

F4001

Hand signals, aborted takeoff, lost sight procedures, HEFOE, wingman/flight leader responsibilities, and any EP.

F4002

Airborne damaged aircraft, lost communication procedures, and any EP.

F4003

PPEL, emergency field locations, and any EP.

F4004

Cruise position/maneuvering, and any EP.

F4005

Course rules and any EP.

5. Block MIF

CTS REF	MANEUVER	F4005
1	General Knowledge/Procedures	4+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
14	VFR Scan	4+
94	Visual Signals	4+
	FORMATION LEAD	
99	Wing Consideration	3+
11	Normal Takeoff	4+
12	Departure	3+
95	Breakup and Rendezvous	3+
32	Course Rules/HFE	3+
98	Section/Formation Approach	1
	FORMATION WING	
100	Interval Takeoff/Running Rendezvous	3+
108	Parade Position	3+
103	VFR Turns Into	3+
104	VFR Turns Away	3+
105	45-Degree AOB Turns	2+
106	Crossunder	3+
95	Breakup and Rendezvous	3+
107	Underrun	3+
119	Cruise	2+
115	Lead Change	3+

MIF continued on next page.

CTS REF	MANEUVER	F4005
	MISCELLANEOUS	
21	HAPL	3
22	LAPL	3
23	PPEL	3
30	PPEL/P	3+
31	LAPL/P	3+
26	Landing Pattern	3+
27	FFL	3+
28	NFL	3+

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
F41	T-34	Basic Formation Solo	0	1	1.5	1.5

1. Prerequisite. F4005.
2. Syllabus Notes. F4101 should be solo. In unusual circumstances, this event may be flown with an IP acting as a safety observer.
3. Special Syllabus Requirements. None.
4. Discuss Items
F4101
Flight integrity, any emergency procedure, and CMU-33A/P survival gear.

5. Block MIF

CTS REF	MANEUVER	F4101
1	General Knowledge/Procedures	4
2	Emergency Procedures	3
3	Headwork/Situational Awareness	3
4	Basic Air Work	4
6	In-Flight Planning/Area Orientation	4
7	In-Flight Checks	4
8	Radio Procedures	4
9	Ground Operations	4
14	VFR Scan	4
94	Visual Signals	4
	FORMATION LEAD	
99	Wing Consideration	3
11	Normal Takeoff	4
12	Departure	3
95	Breakup and Rendezvous	3
32	Course Rules/HFE	3
	FORMATION WING	
100	Interval Takeoff/Running Rendezvous	3
108	Parade Position	3
103	VFR Turns Into	3
104	VFR Turns Away	3
106	Crossunder	3
95	Breakup and Rendezvous	3
107	Underrun	3
115	Lead Change	3
	MISCELLANEOUS	
26	Landing Pattern	3
27	FFL	3
28	NFL	3

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
F42	T-34	Cruise Formation	3	0	6.0	2.0

1. Prerequisites

- a. C4507.
- b. F4101.

2. Syllabus Notes

a. This stage emphasizes three-dimensional cruise maneuvering and the tail-chase exercise. Students shall fly both lead and wing.

b. All flights should depart via section takeoff and return via section VFR or instrument approach.

c. Students shall fly IFR parade for all turns in this stage. There is no requirement for the student to lead an approach; therefore, the lead aircraft IP may fly the airplane during the approach. However, if the lead student is I4105 complete, an actual instrument approach may be flown.

3. Special Syllabus Requirements

F4201

Knock-it-off demonstration.

4. Discuss Items

F4201

Section T/O, cruise position/maneuvering, high AOB turns, energy management, and tail-chase exercise.

F4202

Flight integrity, wingman awareness, and any EP.

F4203

Any EP.

5. Block MIF

CTS REF	MANEUVER	F4203
1	General Knowledge/Procedures	4+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
14	VFR Scan	4+
94	Visual Signals	4+
	Special Syllabus Requirements	1
	FORMATION LEAD	
99	Wing Consideration	3+
11	Normal Takeoff	4+
12	Departure	3+
95	Breakup and Rendezvous	3+
120	Cruise Maneuvering	3+
121	Tail-Chase	3+
98	Section/Formation Approach	2+
	FORMATION WING	
100	Interval Takeoff/Running Rendezvous	3
101	Section/Formation Takeoff	3+
108	Parade Position	3+
104	IFR Parade Turns Away	3+
106	Crossunder	3+
95	Breakup and Rendezvous	3+
107	Underrun	3
119	Cruise	3+
120	Cruise Maneuvering	3+

MIF continued on next page.

CTS REF	MANEUVER	F4203
121	Tail-Chase	3+
115	Lead Change	3+
98	Section/Formation Approach	2+
	MISCELLANEOUS	
27	FFL	3
28	NFL	3

Air Force Formation Flight Training

Block	Media	Title	Events		Hrs	H/X
			Dual	Solo		
F43	T-34	Air Force Formation	6	0	12.0	2.0

1. Prerequisites

- a. Primary phase.
- b. F0302 (AF Formation Exam).

2. Syllabus Notes

a. General. This stage will introduce Air Force fighter/bomber students to the mentality required in the Air Force T-38 flight-training environment, both in the air and on the ground. This is a six-flight block with no check ride. Emphasis in the Air Force Formation stage is Air Force Formation procedures involving instrument flying, area awareness, and energy management. IPs should let the student do as much of the radio communication with ATC as possible.

b. Restrictions. All Formation missions shall be flown two-ship. Students will fly as both lead and wing. Students will wear oxygen mask and be "hot mic" the entire flight.

c. Pattern Training. Pattern training uses the USAF closed pattern at a tower-controlled field. The student must maintain pattern and landing proficiency.

d. Seating. Students shall occupy the front seat for all events in the block.

e. Students shall do all situational EPs in the Air Force standup format.

f. The student that leads out will then be wing back, training requirements permitting. Students shall plan to depart home field via departure procedures and recover at home field via an instrument approach as a formation to a formation landing (weather permitting).

g. Students will use radial/DME and altitude blocks to maintain area boundaries.

h. Air Force tactical formation "shall" be discussed on F4305 and "may" be flown on F4305 and F4306. Tactical is not a critical MIF item in this block.

i. Students are required to achieve MIF on all critical items by the end of the block.

3. Special Syllabus Requirements

F4301

The IP shall demonstrate a ranging exercise in the extended trail cone, while the lead aircraft does a series of wingovers.

4. Discuss Items

F4301

Air Force standup EP, AGSM, G-awareness exercise, AF pattern, formation ground ops, formation takeoff, maintaining the MOA in radial/DME/altitude, lost wingman exercise, breakout procedures, knock-it-off versus terminate calls, and fence/operations check.

F4302

Wing work, extended trail, energy management, and Air Force standup EP.

F4303

Wingman consideration in the weather, flying a formation PAR, and Air Force standup EP.

F4304

Air Force standup EP.

F4305

Tactical formation, straight-and-level, tactical turns, shackle, cross turn, and Air Force standup EP.

F4306

Student brief profile and Air Force standup EP.

5. Block MIF

CTS REF	MANEUVER	F4306
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	3+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
14	VFR Scan	4+
94	Visual Signals	4+
	Special Syllabus Requirements	1
	FORMATION LEAD	
99	Wing Consideration	4+
100	Interval Takeoff/Running Rendezvous	4+
101	Section/Formation Takeoff	4+
12	Departure	4+
122	G-Awareness Exercise	4+
113	Turning Rejoin	4+
97	Wingwork	4+
96	Extended Trail	4+
115	Lead Change	4+
98	Section/Formation Approach	3+
102	Formation Landing	2+
	FORMATION WING	
100	Interval Takeoff/Running Rendezvous	4+
101	Section/Formation Takeoff	4+

MIF continued on next page.

CTS REF	MANEUVER	F4306
108	Fingertip	4+
111	Route	4+
122	G-Awareness Exercise	4+
109	Echelon	4+
112	Straight Ahead Rejoin	4+
113	Turning Rejoin	4+
116	High Yo-Yo	4+
117	Low Yo-Yo	4+
97	Wingwork	4+
106	Crossunder	4+
96	Extended Trail	4+
114	Breakout	4+
115	Lead Change	4+
98	Section/Formation Approach	3+
102	Formation Landing	2+
	MISCELLANEOUS	
110	Lost Wingman	4+
123	Air Force Closed Pattern	4+
28	NFL	4+
73	Teardrop Approach	4
74	Procedure Turn Approach	4
75	Holding Pattern Approach	4
76	Arcing Approach	4
77	Straight-In Approach	4
89	Localizer Approach	4
78	Circling Maneuver/Approach	4
79	PAR Approach	4
80	No Gyro GCA	4
118	Tactical Spread	3
118	Tactical Turns	3

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Chapter VII

Tactical Training

This chapter does not apply to T-34C Primary Flight Training.

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Chapter VIII

Course Training Standards

1. Purpose. These standards outline the tasks and proficiency required of student aviators during Primary training. This training prepares an officer to perform the duties of a rated pilot.

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 (BAW)** standards for all items with altitude, airspeed, or heading parameters.
- c. "Standard" equates to **good** (G/4).
- d. Aircraft control must be smooth and positive. Performance may be within CTS and still not warrant a grade of **good** if control inputs are delayed, erratic, imprecise, or inappropriate. Slight deviations in establishing or maintaining the proper or desired aircraft attitude or position may occur during the maneuver being performed.
- e. Momentary deviations outside CTS that do not compromise flight safety are acceptable if subsequent corrections are timely.
- f. Procedural knowledge and application must comply with applicable directives and allow efficient mission accomplishment. If individual tasks require pre-mission planning, the standards from **MISSION PLANNING** apply.

4. Execution. The MIF regulates student progression to meet required standards prior to phase completion. Instructor pilots shall evaluate student performance against these standards.

5. Job Tasks. Specific performance and standards required are described as follows:

BEHAVIOR STATEMENT	STANDARDS
GRADED ITEM	
<ul style="list-style-type: none"> ● A brief description of the behavior, required action, and/or conditions. 	<ul style="list-style-type: none"> ● The specific standards for the action. May be read as "The student aviator..."

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

7. Course Training Standards

BEHAVIOR STATEMENT	STANDARDS
1. General Knowledge/Procedures	
<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 NATOPS and appropriate directives. 	<ul style="list-style-type: none"> ● Correctly analyzes situation. ● Performs/recites critical action steps from memory. ● Uses checklist when conditions permit. ● Completes procedures in a timely manner.

BEHAVIOR STATEMENT	STANDARDS
3. Headwork/Situational Awareness (SA)	
<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. ● Remains alert and spatially oriented.
4. Basic Air Work (BAW)	
<ul style="list-style-type: none"> ● Establish and maintain desired altitude, airspeed and heading during flight. 	<ul style="list-style-type: none"> ● Maintains aircraft within 100 feet, 10 KIAS, 10° of heading. ● Appropriately uses power, attitude, and trim. ● Levels off within 100 feet of desired altitude. ● Accomplishes 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.
6. In-Flight Planning/Area Orientation	
<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, VFR charts, or FLIP publications. ● Maintains appropriate boundaries and altitude block within a working area as required.

BEHAVIOR STATEMENT	STANDARDS
7. 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, gas, and position reports at least every 20 minutes. ▶ Landing checklist at required configuration points. ▶ Stall/Preaerobatic checklist when required. ▶ Instrument comparison check when required.
8. Radio Procedures	
<ul style="list-style-type: none"> ● Perform R&E checkout as appropriate. ● Use UHF/VHF radio. 	<ul style="list-style-type: none"> ● Correctly and expeditiously performs R&E checkout IAW FTI. ● Makes all calls when required. ● Responds when addressed. ● Uses correct terminology. ● Does not step on others' transmissions.
9. Ground Operations	
<ul style="list-style-type: none"> ● Prepare aircraft for flight. ● Move aircraft from parking area to runway. 	<ul style="list-style-type: none"> ● Correctly and expeditiously performs exterior inspection, prestart, start, taxi, and ground runup checks. ● Taxis safely via prescribed routing within three feet of centerline.

BEHAVIOR STATEMENT	STANDARDS
10. Blindfold Cockpit Check	
<ul style="list-style-type: none"> ● Perform check of cockpit switches/gauges without visual reference. 	<ul style="list-style-type: none"> ● Properly locates and identifies the following switches or gauges without visual reference: <ul style="list-style-type: none"> ▶ PCL-PUT AT IDLE. ▶ CONDITION LEVER-TO FUEL OFF. ▶ EMERGENCY FUEL SHUTOFF-PULL UP, THEN PLACE DOWN. ▶ STANDBY FUEL BOOST PUMP SWITCH-ON. ▶ STARTER SWITCH-ON. ▶ ITT GAUGE-POINT TO IT. ▶ N1 GAUGE-POINT TO IT. ▶ CANOPY EMERGENCY OPEN-PULL. ▶ BATTERY SWITCH-TURN ON. ▶ ELECTRICAL TAKE COMMAND SWITCH-CYCLE IT. ▶ LANDING GEAR HANDLE-RAISE/LOWER IT. ▶ FLAP HANDLE-RAISE/LOWER IT. ▶ ATTITUDE GYRO-POINT TO IT. ▶ VOLT/AMMETER-POINT TO IT. ▶ GENERATOR SWITCH-CYCLE IT (SPRING-LOADED TO GEN). ▶ AIRSPEED-POINT TO IT. ▶ OXYGEN REGULATOR PANEL-SELECT GREEN LEVER "ON," WHITE LEVER 100 PERCENT. ▶ ALTIMETER-POINT TO IT. ▶ UTILITY BUS SWITCHES-TURN THEM OFF. ▶ LANDING GEAR INDICATORS-POINT TO THEM. ▶ TRIM QUADRANT-MOVE TRIM WHEEL PICKED BY INSTRUCTOR. ▶ FUEL QUANTITY INDICATORS-POINT TO THEM. ▶ MAGNETIC (WET) COMPASS-POINT TO IT.

BEHAVIOR STATEMENT	STANDARDS
10. Blindfold Cockpit Check (Continued)	
	<ul style="list-style-type: none"> ▶ LANDING GEAR POWER AND CONTROL C/Bs—PULL THEM. ▶ LANDING GEAR HANDCRANK—ENGAGE CLUTCH KNOB, TURN HANDLE. ▶ UHF CONTROL PANEL—SELECT "GUARD" CHANNEL. ▶ TRANSPONDER—POINT TO IT. ▶ STROBE LIGHT—TURN ON. ▶ RMI—POINT TO IT. ▶ AVIONICS MASTER SWITCH—CYCLE IT. ▶ ANNUNCIATOR PANEL—POINT TO IT. ▶ ENGINE AIR BYPASS—PULL HANDLE. ▶ ALTERNATE STATIC AIR SOURCE—SWITCH TO ALTERNATE.
11. Normal 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. ● Checks instruments at 500 ft-lbs. ● Applies appropriate crosswind controls. ● Maintains runway centerline within 10 feet. ● Rotates to proper takeoff attitude approaching 80 KIAS. ● Transitions to cross-check scan.
12. Departure	
<ul style="list-style-type: none"> ● Perform VFR, IFR, or simulated IFR departure. 	<ul style="list-style-type: none"> ● Complies with controller instructions or departure procedure.
13. Trim	
<ul style="list-style-type: none"> ● Properly trim the aircraft as required by changes in airspeed, power, or configuration. 	<ul style="list-style-type: none"> ● Trims in the correct sequence: rudder, elevator, and aileron.

BEHAVIOR STATEMENT	STANDARDS
14. 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"> ● Visually detects traffic and weather conflicts.
15. Level Speed Change (LSC)	
<ul style="list-style-type: none"> ● Perform a level speed change per the FTI. 	<ul style="list-style-type: none"> ● Maintains BAW.
16. 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. ● Maintains BAW. ● Holds bank angle $\pm 10^\circ$. ● Rolls out $\pm 10^\circ$ of reversal heading.
17. Slow Flight/Minimum Control Maneuver (SFMCM)	
<ul style="list-style-type: none"> ● Perform SFMCM per the FTI. 	<ul style="list-style-type: none"> ● Commences in the full-flap landing configuration. ● Performs clearing turn. ● Maintains: <ul style="list-style-type: none"> ▶ At/above 6500 feet AGL. ▶ BAW. ▶ ± 1 unit AOA.
18. Power Off Stall (POS)	
<ul style="list-style-type: none"> ● Perform a power off stall and recover per the FTI. 	<ul style="list-style-type: none"> ● Commences in the clean configuration. ● Performs clearing turn. ● Trims aircraft for 95-105 KIAS glide. ● Initiates recovery at stall entry. ● Recovers without secondary stall within 1000 feet of entry altitude.

BEHAVIOR STATEMENT	STANDARDS
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 full-flap landing configuration. ● Performs clearing turn. ● Enters stall at/above 6500 feet AGL. ● Initiates recovery at stall entry. ● Loses less than 150 feet during recovery. ● Recovers without secondary stall.
20. Spin	
<ul style="list-style-type: none"> ● Spin and recover per FTI. 	<ul style="list-style-type: none"> ● Performs clearing turn. ● Enters spin at/above 9000 feet AGL: <ul style="list-style-type: none"> ▶ PCL idle. ▶ Pitch 25-35 degrees. ▶ AOB less than 5°. ● Initiates proper recovery inputs following a stabilized steady-state spin. ● Recovers from ensuing unusual attitude without exceeding 4.5 G or 24 AOA.
21. High Altitude Power Loss (HAPL)	
<ul style="list-style-type: none"> ● Intercept the ELP at or below high key following a simulated engine failure above 2500 feet AGL. 	<ul style="list-style-type: none"> ● Maintains airspeed 90-110 KIAS. ● Selects suitable landing site. ● Establishes aircraft on final in position to make a safe landing at the selected site.
22. Low Altitude Power Loss (LAPL)	
<ul style="list-style-type: none"> ● Intercept the ELP following a simulated engine failure between 800 and 2500 feet AGL. 	<ul style="list-style-type: none"> ● Maintains airspeed 90-110 KIAS. ● Selects suitable landing site. ● Establishes aircraft on final in position to make a safe landing at the selected site.

BEHAVIOR STATEMENT	STANDARDS
23. Practice Precautionary Emergency Landing (PPEL)	
<ul style="list-style-type: none"> ● In response to simulated EP, proceed to high key for the nearest runway, then intercept the ELP. ● Perform from initiation to crossing runway threshold. 	<ul style="list-style-type: none"> ● Performs timely procedural execution. ● Selects nearest suitable runway and appropriate high key. ● Maintains airspeed 90-110 KIAS on the ELP. ● Uses power rather than delaying configuration to maintain ELP profile. ● If conditions permit, lowers flaps at low key. ● Establishes aircraft on final in position to make a safe landing.
24. OLF Operations	
<ul style="list-style-type: none"> ● Perform a VFR entry into the traffic pattern. ● Perform a break turn to downwind. ● Depart pattern per FTI. 	<ul style="list-style-type: none"> ● Maintains initial and downwind altitudes as prescribed in local directives. ● Breaks at appropriate point with correct interval. ● Establishes aircraft at the appropriate initial point according to local pattern procedures.
25. VFR Straight-In Approach	
<ul style="list-style-type: none"> ● Perform a VFR entry into the "box" pattern. ● Fly base leg to intercept a standard glideslope on final. 	<ul style="list-style-type: none"> ● Establishes contact with ATC in a timely manner. ● Transitions to landing configuration NLT base leg or 1-mile final. ● Maintains landing pattern CTS on final.

BEHAVIOR STATEMENT	STANDARDS
26. Landing Pattern	
<ul style="list-style-type: none"> ● If from initial: <ul style="list-style-type: none"> ▶ From rolling out on downwind to final. ● If from takeoff, touch-and-go, or waveoff: <ul style="list-style-type: none"> ▶ Commencing the crosswind turn to final. 	<ul style="list-style-type: none"> ● Maximum 30° AOB. ● Full Flap: 85-100 KIAS from 180 until final. ● No-Flap: 90-105 KIAS from 180 until final. ● Rolls out on final: <ul style="list-style-type: none"> ▶ Within 75 feet of runway centerline. ▶ With 1200-1500 feet of straightaway. ▶ Between 100-150 feet AGL.
27. Full Flap Landing (FFL)	
<ul style="list-style-type: none"> ● Execute normal landing per the FTI. ● From final until: <ul style="list-style-type: none"> ▶ Touch-and-go—commencing crosswind turn. ▶ Full stop—aircraft is at taxi speed. 	<ul style="list-style-type: none"> ● Maintains: <ul style="list-style-type: none"> ▶ Correct glidepath until flare initiation. ▶ Minimum 80 KIAS until landing transition. ● Touches down with: <ul style="list-style-type: none"> ▶ Appropriate crosswind controls. ▶ Main gear first (nose-high attitude). ▶ Nose gear ±10 feet of centerline. ● Touches down in the touchdown zone as defined by Contact FTI and local instructions.

BEHAVIOR STATEMENT	STANDARDS
28. No-Flap Landing (NFL)	
<ul style="list-style-type: none"> ● Execute no-flap landing per the FTI. ● From final until: <ul style="list-style-type: none"> ▶ Touch-and-go—commencing crosswind turn. ▶ Full stop—aircraft is at taxi speed. 	<ul style="list-style-type: none"> ● Maintains: <ul style="list-style-type: none"> ▶ Correct glidepath until flare initiation. ▶ Minimum 90 KIAS until landing transition. ● Touches down with: <ul style="list-style-type: none"> ▶ Appropriate crosswind controls. ▶ Main gear first (nose-high attitude). ▶ Nose gear ± 10 feet of centerline. ● Touches down in the touchdown zone as defined by Contact FTI and local instructions.
29. Go Around/Waveoff	
<ul style="list-style-type: none"> ● Discontinue approach to landing. 	<ul style="list-style-type: none"> ● Expeditiously executes waveoff procedures. ● Initiates waveoff when: <ul style="list-style-type: none"> ▶ Stall warning systems actuate (rudder shakers). ▶ Aircraft requires more than 30° AOB to avoid overshooting final. ▶ Directed. ▶ Aircraft is not in a position to make a safe landing.

BEHAVIOR STATEMENT	STANDARDS
30. PPEL/P	
<ul style="list-style-type: none"> ● Procedures comply with the FTI. ● IP initiated at/above 300 feet AGL. 	<ul style="list-style-type: none"> ● Performs timely procedural execution. ● Selects nearest available runway. ● Maintains airspeed 90-110 KIAS on the ELP. ● Uses power rather than delaying configuration to maintain ELP profile. ● If conditions permit, lowers flaps at low key. ● Establishes aircraft on final in position to make a safe landing.
31. LAPL/P	
<ul style="list-style-type: none"> ● Procedures comply with the FTI. ● IP initiated above 800 feet AGL. 	<ul style="list-style-type: none"> ● Performs timely procedural execution. ● Selects nearest available runway/airfield environment, or establishes controlled glide to off-airfield landing. ● Establishes aircraft on final in position to make a safe landing at the selected site.
32. Course Rules/Home Field Entry (HFE)	
<ul style="list-style-type: none"> ● Return to home field using local course rules. 	<ul style="list-style-type: none"> ● Complies with the FTI, local course rules, and FWOP as applicable. ● Navigation: <ul style="list-style-type: none"> ▶ Proceeds under own navigation to HFE point. ▶ Asks for, and successfully complies with, radar vectors to HFE point. ● Performs: <ul style="list-style-type: none"> ▶ Break entry IAW FTI procedures. ▶ VFR straight-in IAW FTI procedures.

BEHAVIOR STATEMENT	STANDARDS
33. Unusual Attitude Recovery (Nose-High)	
<ul style="list-style-type: none"> ● Recover from nose-high unusual attitude. 	<ul style="list-style-type: none"> ● Minimizes airspeed loss during recovery. ● Does not: <ul style="list-style-type: none"> ▶ Overstress or stall aircraft. ▶ Enter subsequent unusual attitude.
34. Unusual Attitude Recovery (Nose-Low)	
<ul style="list-style-type: none"> ● Recover from nose-low unusual attitude. 	<ul style="list-style-type: none"> ● Minimizes altitude loss and airspeed buildup during recovery. ● Does not: <ul style="list-style-type: none"> ▶ Overstress or stall aircraft. ▶ Enter subsequent unusual attitude.
35. Unusual Attitude Recovery (Inverted)	
<ul style="list-style-type: none"> ● Recover from an inverted unusual attitude. 	<ul style="list-style-type: none"> ● Minimizes altitude loss and airspeed buildup during recovery. ● Does not: <ul style="list-style-type: none"> ▶ Overstress or stall aircraft. ▶ Split-S.
36. Aileron Roll	
<ul style="list-style-type: none"> ● Perform an aileron roll per the FTI. 	<ul style="list-style-type: none"> ● Maintains minimum yaw during roll. ● Rolls out with less than 5° AOB.
37. Loop	
<ul style="list-style-type: none"> ● Perform a loop per the FTI. 	<ul style="list-style-type: none"> ● Initiates using 3-4 Gs. ● Completes within: <ul style="list-style-type: none"> ▶ 200 feet of entry altitude. ▶ ±10° of entry heading.

BEHAVIOR STATEMENT	STANDARDS
38. Wingover	
<ul style="list-style-type: none"> ● Perform a wingover per the FTI. 	<ul style="list-style-type: none"> ● Does not exceed: <ul style="list-style-type: none"> ▶ 2 Gs. ▶ 90° ±10° AOB. ● Arrives at 90° position: <ul style="list-style-type: none"> ▶ 80-90 degrees AOB. ▶ 85-95 degrees from entry heading. ▶ 80-100 KIAS. ● Arrives at level flight position within: <ul style="list-style-type: none"> ▶ 100 feet of entry altitude. ▶ 10° of reciprocal heading.
39. Barrel Roll	
<ul style="list-style-type: none"> ● Perform a barrel roll per the FTI. 	<ul style="list-style-type: none"> ● Does not exceed 2 ±0.5 Gs. ● Arrives at 45° position: <ul style="list-style-type: none"> ▶ 80-100 degrees AOB. ▶ 55-60 degrees nose high. ● Arrives at 90° position: <ul style="list-style-type: none"> ▶ Nose 10-20 degrees above the horizon. ▶ 170-190 degrees AOB. ▶ 90-100 KIAS. ▶ 80-90 degrees of entry heading. ● Completes within: <ul style="list-style-type: none"> ▶ 200 feet of entry altitude. ▶ 10° of entry heading.
40. One-Half Cuban Eight	
<ul style="list-style-type: none"> ● Perform one-half Cuban eight per the FTI. 	<ul style="list-style-type: none"> ● Initiates using 3-4 Gs. ● Completes within: <ul style="list-style-type: none"> ▶ 200 feet of entry altitude. ▶ 20° of reciprocal heading.

BEHAVIOR STATEMENT	STANDARDS
41. Split-S	
<ul style="list-style-type: none"> ● Perform a split-S per the FTI. 	<ul style="list-style-type: none"> ● Initiates at: <ul style="list-style-type: none"> ▶ 125-135 KIAS. ▶ 10-20 degrees nose high. ● Recovers within: <ul style="list-style-type: none"> ▶ 1300-1700 feet below entry altitude. ▶ 20° of reciprocal heading.
42. Immelmann	
<ul style="list-style-type: none"> ● Perform Immelmann per the FTI. 	<ul style="list-style-type: none"> ● Initiates using 3-4 Gs. ● Completes within: <ul style="list-style-type: none"> ▶ 90-100 KIAS. ▶ 20° of reciprocal heading. ▶ 1300-1700 feet above entry altitude.
43. Combination Maneuver	
<ul style="list-style-type: none"> ● Combine a series of aerobatic maneuvers into a single evolution. 	<ul style="list-style-type: none"> ● Preplans all combination maneuvers during preflight brief. ● Performs all linked maneuvers per the FTI.
44. Angle of Attack (AOA) Approach	
<ul style="list-style-type: none"> ● Perform AOA approach to a normal flared landing. 	<ul style="list-style-type: none"> ● Transitions to AOA approaching the upwind numbers. ● Maintains AOA ± 1 unit. ● Rolls out on final: <ul style="list-style-type: none"> ▶ 1200-1500 feet of straightaway. ▶ 100-150 feet AGL. ▶ Within 75 feet of runway centerline. ● Executes normal flared landing.

BEHAVIOR STATEMENT	STANDARDS
45. VFR Course Maintenance	
<ul style="list-style-type: none"> • Navigate from point-to-point using dead reckoning and visual references. 	<ul style="list-style-type: none"> • Establishes chart position using clock-chart-ground. • Identifies chart significant landmarks along route. • Maintains airspeed to achieve planned leg time ± 3 minutes, winds permitting.
46. VFR Arrival	
<ul style="list-style-type: none"> • Plan and perform arrival and entry into a controlled or uncontrolled field. 	<ul style="list-style-type: none"> • Safely executes a VFR arrival and pattern entry IAW FTI and appropriate directives.
47. VFR Pattern	
<ul style="list-style-type: none"> • Use FAA standard pattern procedures to establish aircraft on final. 	<ul style="list-style-type: none"> • Uses CTAF or pattern direction indicators to establish pattern direction. • Maintains FAA standard pattern parameters in accordance with the current Aeronautical Information Manual.
48. Constant Angle of Bank Turns (CABT)	
<ul style="list-style-type: none"> • Perform turn at an AOB specified by the IP. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
49. Constant Airspeed Climbs	
<ul style="list-style-type: none"> • Perform climb at airspeed specified by the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
50. Constant Rate Turns	
<ul style="list-style-type: none"> • Perform turns to maintain a constant rate of turn, correcting for deviations throughout the turn. 	<ul style="list-style-type: none"> • Maintains BAW parameters.

BEHAVIOR STATEMENT	STANDARDS
51. Constant Rate Climbs and Descents (CRCD)	
<ul style="list-style-type: none"> • Perform climbs and descents to maintain a constant vertical velocity, correcting for deviation throughout the climb and descent. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
52. Initial Climb to Altitude (ICA)	
<ul style="list-style-type: none"> • Perform initial climb to altitude with reversals as directed by IP. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
53. S-1 Pattern	
<ul style="list-style-type: none"> • Perform the S-1 pattern, maintaining a constant vertical velocity, correcting for deviation through the maneuver. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
54. Direct to a VOR/TACAN	
<ul style="list-style-type: none"> • Establish the aircraft inbound to the station. 	<ul style="list-style-type: none"> • Establishes aircraft on inbound radial, within ± 3 radials.
55. Penetration Maneuver	
<ul style="list-style-type: none"> • Perform the penetration maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
56. BAC Maneuver	
<ul style="list-style-type: none"> • Perform the BAC maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
57. GCA Maneuver	
<ul style="list-style-type: none"> • Perform the GCA maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
58. Approach Maneuver	
<ul style="list-style-type: none"> • Perform the approach maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.

BEHAVIOR STATEMENT	STANDARDS
59. Unusual Attitude (IMC)	
<ul style="list-style-type: none"> ● Perform unusual attitude recovery using full panel references. 	<ul style="list-style-type: none"> ● Nose-low: <ul style="list-style-type: none"> ▶ Recovers minimizing altitude loss and airspeed buildup. ● Nose-high: <ul style="list-style-type: none"> ▶ Does not stall aircraft. ▶ Does not overstress aircraft. ▶ Does not enter subsequent unusual attitude.
60. Partial Panel (Straight and Level)	
<ul style="list-style-type: none"> ● Perform straight and level flight without the use of the RMI or the attitude gyro. 	<ul style="list-style-type: none"> ● Maintains: <ul style="list-style-type: none"> ▶ Altitude ± 300 feet. ▶ ± 20 KIAS. ▶ $\pm 20^\circ$ heading. ▶ \leq standard rate turn.
61. Partial Panel (Timed Turns)	
<ul style="list-style-type: none"> ● Perform timed turns without the use of the RMI or the attitude gyro. 	<ul style="list-style-type: none"> ● Determines the proper turning method. ● Maintains: <ul style="list-style-type: none"> ▶ Altitude ± 300 feet. ▶ ± 20 KIAS. ▶ $\pm 20^\circ$ heading. ▶ \leq standard-rate turn.
62. Partial Panel (Enroute Descents)	
<ul style="list-style-type: none"> ● Perform enroute descents without the use of the RMI or the attitude gyro. 	<ul style="list-style-type: none"> ● Maintains: <ul style="list-style-type: none"> ▶ Altitude ± 300 feet. ▶ ± 20 KIAS. ▶ $\pm 20^\circ$ heading. ▶ \leq standard-rate turn. ▶ Rate of descent ± 100 FPM.

BEHAVIOR STATEMENT	STANDARDS
63. Partial Panel (Unusual Attitudes)	
<ul style="list-style-type: none"> ● Perform unusual attitude recovery using partial panel references. 	<ul style="list-style-type: none"> ● Nose-low: <ul style="list-style-type: none"> ▶ Recovers minimizing altitude loss and airspeed buildup. ● Nose-high: <ul style="list-style-type: none"> ▶ Does not stall aircraft. ▶ Does not overstress aircraft. ▶ Does not enter subsequent unusual attitude.
64. 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 ± 3 radials of centerline. ● Determines approximate wind direction and applies proper crosswind correction. ● Positions the aircraft at a required intersection or leads the turn at an intersection to roll out on the required radial $\pm 3^\circ$. ● Gives position report as required. ● For GPS, maintains ± 2 NM of centerline.
65. Point-to-Point (PTP)	
<ul style="list-style-type: none"> ● Proceed direct to an assigned fix using VOR/DME or TACAN point-to-point per FTI. 	<ul style="list-style-type: none"> ● Applies FTI procedures to expeditiously establish a correct initial heading. ● Continuously updates heading to: <ul style="list-style-type: none"> ▶ Avoid sudden, large, heading changes. ▶ Arrive within 0.5 DME and 10 radials of desired point.

BEHAVIOR STATEMENT	STANDARDS
66. Arcing	
<ul style="list-style-type: none"> ● Perform per FTI: <ul style="list-style-type: none"> ▶ VOR/DME or TACAN arcing. ▶ Arc-to-radial intercepts. ▶ Radial-to-arc intercepts. 	<ul style="list-style-type: none"> ● Maintains the arc ± 0.5 DME. ● Calculates lead points to join: <ul style="list-style-type: none"> ▶ Arc ± 0.5 DME. ▶ Radial $\pm 3^\circ$.
67. Climbs and Descents	
<ul style="list-style-type: none"> ● Perform climbs and descents per FTI or ATC direction. 	<ul style="list-style-type: none"> ● Maintains airspeed as appropriate for airspace.
68. Radial Intercepts	
<ul style="list-style-type: none"> ● Perform radial intercepts per FTI or ATC direction. 	<ul style="list-style-type: none"> ● Establishes aircraft $\pm 3^\circ$ of desired radial.
69. Over the Station Intercept (OSI)	
<ul style="list-style-type: none"> ● Perform VOR/TACAN course intercepts immediately after station passage. 	<ul style="list-style-type: none"> ● Intercepts desired radial within 2 minutes after station passage.
70. Station Passage	
<ul style="list-style-type: none"> ● Identify station passage per FTI. 	<ul style="list-style-type: none"> ● Identifies station passage for the NAVAID in use.
71. VOR Holding	
<ul style="list-style-type: none"> ● Perform VOR holding per FTI. 	<ul style="list-style-type: none"> ● Computes proper entry turn. ● Estimates wind direction and applies appropriate corrections. ● Establishes and maintains aircraft within holding airspace.
72. TACAN Holding	
<ul style="list-style-type: none"> ● Perform TACAN holding per FTI. 	<ul style="list-style-type: none"> ● Computes proper entry turn. ● Estimates wind direction and applies appropriate corrections. ● Establishes and maintains aircraft within holding airspace.

BEHAVIOR STATEMENT	STANDARDS
73. Teardrop (TD) Approach	
<ul style="list-style-type: none"> ● Perform a teardrop approach per FTI. 	<ul style="list-style-type: none"> ● IAF to FAF: <ul style="list-style-type: none"> ▶ Maintains course $\pm 5^\circ$ or valid intercept. ● By the FAF or initiating descent to MDA: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Final: <ul style="list-style-type: none"> ▶ Maintains $\pm 3^\circ$ of desired course. ▶ Reaches and maintains MDA +100/-0 feet.
74. Procedure Turn (PT) Approach	
<ul style="list-style-type: none"> ● Perform a procedure turn approach per FTI. 	<ul style="list-style-type: none"> ● IAF to FAF: <ul style="list-style-type: none"> ▶ Maintains course $\pm 5^\circ$ or valid intercept. ● By the FAF or initiating descent to MDA: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Final: <ul style="list-style-type: none"> ▶ Maintains $\pm 3^\circ$ of desired course. ▶ Reaches and maintains MDA +100/-0 feet.

BEHAVIOR STATEMENT	STANDARDS
75. Holding Pattern (HP) Approach	
<ul style="list-style-type: none"> ● Perform a holding pattern approach per FTI. 	<ul style="list-style-type: none"> ● Computes proper entry turn. ● IAF to FAF: <ul style="list-style-type: none"> ▶ Maintains course $\pm 5^\circ$ or valid intercept. ● By the FAF or initiating descent to MDA. <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Final: <ul style="list-style-type: none"> ▶ Maintains $\pm 3^\circ$ of desired course. ▶ Reaches and maintains MDA +100/-0 feet.
76. Arcing Approach	
<ul style="list-style-type: none"> ● Perform an arcing approach per FTI. 	<ul style="list-style-type: none"> ● Adheres to standards for arcing. ● By the FAF or initiating descent to MDA: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Final: <ul style="list-style-type: none"> ▶ Maintains $\pm 3^\circ$ of desired course. ▶ Reaches and maintains MDA +100/-0 feet.
77. Straight-In Approach	
<ul style="list-style-type: none"> ● Perform a straight-in approach per FTI. 	<ul style="list-style-type: none"> ● By the FAF or initiating descent to MDA: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Final: <ul style="list-style-type: none"> ▶ Maintains $\pm 3^\circ$ of desired course. ▶ Reaches and maintains MDA +100/-0 feet.

BEHAVIOR STATEMENT	STANDARDS
78. Circling Maneuver/Approach	
<ul style="list-style-type: none"> ● Visually align the aircraft for landing on a runway other than that to which the approach was flown or from a circling IAP per the FTI. 	<ul style="list-style-type: none"> ● Properly orients circling instructions to the landing runway. ● Selects appropriate MDA for aircraft category. ● Maintains at/above MDA consistent with weather. ● Remains within the clear zone for the approach category. ● Executes missed approach instructions for the approach flown.
79. Precision Approach Radar (PAR) Approach	
<ul style="list-style-type: none"> ● Perform final approach from descent point to DH using PAR for guidance. 	<ul style="list-style-type: none"> ● Responds quickly and correctly to controller instructions. ● By starting descent to DH: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Maintains: <ul style="list-style-type: none"> ▶ Airspeed 95-105 KIAS on final. ▶ Heading $\pm 3^\circ$. ● Is in position to make safe landing at decision height.

BEHAVIOR STATEMENT	STANDARDS
80. No Gyro Ground-Controlled Approach (GCA)	
<ul style="list-style-type: none"> ● Perform final approach from descent point to DH/MDA using PAR/ASR for guidance. 	<ul style="list-style-type: none"> ● Responds quickly and correctly to controller instructions. ● By starting descent to DH/MDA: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Maintains: <ul style="list-style-type: none"> ▶ Airspeed 95-105 KIAS on final. ▶ Standard rate turn until established on final. ▶ Half standard-rate turns on final. ● Is in position to make safe landing at DH/MDA.
81. Radar Vectors to Final Approach Course (RVFAC)	
<ul style="list-style-type: none"> ● Perform an approach using radar vectors to final approach course per FTI. 	<ul style="list-style-type: none"> ● Responds quickly and correctly to controller instructions. ● Maintains headings $\pm 5^\circ$.
82. Missed Approach	
<ul style="list-style-type: none"> ● Perform a missed approach. 	<ul style="list-style-type: none"> ● Complies with FTI procedures. ● Initiates when field not in sight and <ul style="list-style-type: none"> ▶ Nonprecision, <ul style="list-style-type: none"> ▪ Inside FAF and full scale CDI deflection. ▪ At specified MAP DME. ▪ At expiration of timing in the absence of DME. ▶ Precision, first of <ul style="list-style-type: none"> ▪ Decision height. ▪ Controller-directed. ▶ Or, not in position for safe landing.

BEHAVIOR STATEMENT	STANDARDS
83. VOR/TACAN Final	
<ul style="list-style-type: none"> ● Perform the final approach segment per the FTI. 	<ul style="list-style-type: none"> ● Final: <ul style="list-style-type: none"> ▶ Maintains $\pm 3^\circ$ of desired course. ▶ Reaches and maintains MDA +100/-0 feet.
84. Use of ATIS/PMSV/FSS	
<ul style="list-style-type: none"> ● Use ATIS/PMSV to update destination conditions. ● 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 or otherwise requests ATIS properly. ● 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.
85. In-Flight Computations	
<ul style="list-style-type: none"> ● Periodically compute: <ul style="list-style-type: none"> ▶ Groundspeed. ▶ ETE/ETA. ▶ Fuel at destination. 	<ul style="list-style-type: none"> ● Computes: <ul style="list-style-type: none"> ▶ Groundspeed ± 5 knots. ▶ ETE/ETA consistent with groundspeed. ▶ Fuel consistent with groundspeed.
86. Intersection Holding	
<ul style="list-style-type: none"> ● Hold as ATC directs at a depicted intersection. 	<ul style="list-style-type: none"> ● Understands and correctly applies elements of holding clearance. ● Computes proper entry turn. ● Estimates wind direction and applies appropriate corrections. ● Establishes and maintains aircraft within holding airspace.
87. Class A Operations	
<ul style="list-style-type: none"> ● Make appropriate altimeter changes entering and departing Class A airspace. 	<ul style="list-style-type: none"> ● Changes altimeter to 29.92 passing FL 180 in the climb and sets altimeter setting in the descent IAW the FIH.

BEHAVIOR STATEMENT	STANDARDS
88. High Altitude Approach	
<ul style="list-style-type: none"> ● Perform high altitude approach procedure from IAF to MAP. 	<ul style="list-style-type: none"> ● Plans descent rate consistent with approach requirements. ● Maintains standards for appropriate IAP layout.
89. Localizer Approach	
<ul style="list-style-type: none"> ● Perform final approach from FAF to MAP using localizer for guidance. 	<ul style="list-style-type: none"> ● Maintains: <ul style="list-style-type: none"> ▶ $\pm 2.5^\circ$ of localizer course. ▶ 115-125 KIAS. ▶ MDA +100/-0 feet.
90. Airport Surveillance Radar (ASR) Approach	
<ul style="list-style-type: none"> ● Perform final approach from descent point to MAP using ASR for guidance. 	<ul style="list-style-type: none"> ● Responds quickly and correctly to controller instructions. ● By starting descent to MDA: <ul style="list-style-type: none"> ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. ● Maintains: <ul style="list-style-type: none"> ▶ Airspeed 115-125 KIAS on final. ▶ Heading $\pm 3^\circ$. ● Is in position to make safe landing at MAP.
91. GPS Holding	
<ul style="list-style-type: none"> ● Perform GPS holding as per FTI. 	<ul style="list-style-type: none"> ● Computes proper entry turn. ● Estimates wind direction and applies appropriate crosswind correction. ● Establishes and maintains aircraft within holding airspace.

BEHAVIOR STATEMENT	STANDARDS
92. GPS RVFAC	
<ul style="list-style-type: none"> ● Perform a GPS approach using radar vectors to final approach course as per FTI. 	<ul style="list-style-type: none"> ● On radar vectors: <ul style="list-style-type: none"> ▶ Maintains heading within $\pm 5^\circ$. ▶ Utilizes OBS or LEG mode correctly. ● At 3 NM from FAWP, ensures FAWP is active waypoint. ● At 2 NM from FAWP, ensures GPS is in active mode. ● Final: <ul style="list-style-type: none"> ▶ Ensures active waypoint is missed approach waypoint. ▶ Maintains course ± 0.15 NM of desired course. ▶ Reaches and maintains MDA +100/-0 feet.
93. GPS Missed Approach	
<ul style="list-style-type: none"> ● Perform a missed approach. 	<ul style="list-style-type: none"> ● Correctly identifies missed approach waypoint. ● Complies with FTI procedures. <ul style="list-style-type: none"> ▶ Initiates when field not in sight and <ul style="list-style-type: none"> ▪ Inside final approach waypoint and full scale CDI deflection occurs. ▪ RAIM failure. ▪ GPS does not transition to the approach active mode. ▶ Performs at specified GPS missed approach waypoint.
94. Visual Signals	
<ul style="list-style-type: none"> ● Communicate using hand, head, and aircraft movements. 	<ul style="list-style-type: none"> ● Performs IAW FTI.
95. Breakup and Rendezvous	
<ul style="list-style-type: none"> ● Separate flight and return to close formation. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Lead monitors wing's position.

BEHAVIOR STATEMENT	STANDARDS
96. Extended Trail	
<ul style="list-style-type: none"> ● Perform extended trail maneuvering as lead or wing. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Smoothly maneuvers within FTI parameters. ▶ Monitors wing. ● Wing: <ul style="list-style-type: none"> ▶ Recognizes changes in aspect, angle-off, and closure/range. ▶ Correctly establishes lead/lag pursuit to maintain FTI position.
97. Wingwork	
<ul style="list-style-type: none"> ● Staying in close formation. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maneuvers smoothly. ▶ Maintains FTI parameters. ▶ Monitors wingmen. ● Wing maintains parade/fingertip parameters.
98. Section/Formation Approach	
<ul style="list-style-type: none"> ● Execute an instrument or VFR straight-in approach as lead or wing. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maintains appropriate contact, instrument or formation FTI approach parameters and procedures. ▶ Maintains wing consideration. ● Wing: <ul style="list-style-type: none"> ▶ Maintains parade/fingertip parameters.
99. Wing Consideration	
<ul style="list-style-type: none"> ● Plan and maneuver to avoid unnecessarily complicating wing's tasks. 	<ul style="list-style-type: none"> ● Considers airspace and weather in planning maneuvers. ● Monitors wing. ● Does not exceed wing's capabilities. ● Maneuvers smoothly and avoids abrupt power changes. ● Does not exceed FTI parameters.

BEHAVIOR STATEMENT	STANDARDS
100. Interval Takeoff/Running Rendezvous	
<ul style="list-style-type: none"> ● Perform takeoff as wing from takeoff clearance until in parade/fingertip position. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Wing accomplishes timely running rendezvous.
101. Section/Formation Takeoff	
<ul style="list-style-type: none"> ● Perform takeoff from takeoff clearance through landing gear retraction while in close formation. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Wing maintains takeoff position until gear retraction, and then expeditiously moves to parade/fingertip position.
102. Formation Landing	
<ul style="list-style-type: none"> ● Perform landing from one mile final through rollout while in close formation. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Wing maintains stacked level position through touchdown, and then drops back during rollout.
103. VFR Turns Into	
<ul style="list-style-type: none"> ● Wing is on the inside of the turn while in parade. 	<ul style="list-style-type: none"> ● Maintains parade position.
104. VFR Turns Away/IFR Parade Turns Away	
<ul style="list-style-type: none"> ● Wing is on the outside of the turn while in parade. 	<ul style="list-style-type: none"> ● Maintains proper position and rotates about own longitudinal axis (VFR). ● Maintains parade position (IFR).
105. 45-Degree AOB Turns	
<ul style="list-style-type: none"> ● Wing is on the outside/inside of the turn while executing 45° AOB. 	<ul style="list-style-type: none"> ● Maintains parade position.
106. Crossunder	
<ul style="list-style-type: none"> ● Wing moves from parade/fingertip on one side of the formation to parade/fingertip on the other side. 	<ul style="list-style-type: none"> ● Performs IAW appropriate FTI.

BEHAVIOR STATEMENT	STANDARDS
107. Underrun	
<ul style="list-style-type: none"> ● Wing discontinues joinup due to being excessively acute, acute in close, or has excessive closure. 	<ul style="list-style-type: none"> ● Recognizes requirement for underrun in time to safely execute procedures IAW the appropriate FTI.
108. Parade/Fingertip	
<ul style="list-style-type: none"> ● Maintain close formation position IAW the FTI. 	<ul style="list-style-type: none"> ● Maintains these parameters: <ul style="list-style-type: none"> ▶ Wingtip separation: 4 feet to 10 feet. ▶ Fore/aft from bearing line: 4 feet. ▶ Vertical deviation: 4 feet. ▶ Smooth flight control and PCL corrections.
109. Echelon	
<ul style="list-style-type: none"> ● Maintain close formation when lead turns away. 	<ul style="list-style-type: none"> ● Maintains position IAW FTI.
110. Lost Wingman	
<ul style="list-style-type: none"> ● Execute appropriate separation procedure IAW the FTI. 	<ul style="list-style-type: none"> ● Safely executes procedures IAW the FTI.
111. Route	
<ul style="list-style-type: none"> ● Maintain enroute medium/high level formation position IAW the FTI. 	<ul style="list-style-type: none"> ● Maintains approximate position according to other duties.
112. Straight Ahead Rejoin	
<ul style="list-style-type: none"> ● Reform to fingertip while lead is maintaining constant heading. 	<ul style="list-style-type: none"> ● Performs IAW FTI.
113. Turning Rejoin	
<ul style="list-style-type: none"> ● Reform to fingertip while lead is maintaining constant angle-of-bank turn. 	<ul style="list-style-type: none"> ● Performs IAW FTI.

BEHAVIOR STATEMENT	STANDARDS
114. Breakout	
<ul style="list-style-type: none"> ● Wing departs the formation when: <ul style="list-style-type: none"> ▶ Unable to safely maintain position. ▶ Loses sight of lead. ▶ Overshoot will result in passing under lead. ▶ Lead directs. 	<ul style="list-style-type: none"> ● Performs expeditiously IAW FTI.
115. Lead Change	
<ul style="list-style-type: none"> ● Transfer control of the flight from lead to wing. 	<ul style="list-style-type: none"> ● Performs expeditiously IAW the appropriate FTI parameters and procedures.
116. High Yo-Yo	
<ul style="list-style-type: none"> ● Get out of lead's turn plane when lead commands a turning rejoin, then rejoin on lead. 	<ul style="list-style-type: none"> ● Executes high yo-yo when appropriate and IAW FTI. ● Climbs sufficiently above lead's turn plane and keeps lead in sight at all times.
117. Low Yo-Yo	
<ul style="list-style-type: none"> ● Use low yo-yo to close range and obtain the rejoin line on lead. 	<ul style="list-style-type: none"> ● Executes low yo-yo when appropriate and IAW FTI.
118. Tactical Spread/Tactical Turns	
<ul style="list-style-type: none"> ● Straight and level: <ul style="list-style-type: none"> ▶ Wing maintains position on lead. ● During turns: <ul style="list-style-type: none"> ▶ Wing maintains position on lead. 	<ul style="list-style-type: none"> ● Wing: <ul style="list-style-type: none"> ▶ Maintains position using energy maneuverability concepts. ▶ Fixes position IAW FTI. ▶ Deconflicts lead's flight path. ▶ Flies appropriate geometry IAW FTI. ● Lead: <ul style="list-style-type: none"> ▶ Provides predictable platform for wing.

BEHAVIOR STATEMENT	STANDARDS
119. Cruise	
<ul style="list-style-type: none"> ● Maintain enroute formation position IAW the FTI. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Does not exceed 45° angle of bank. ▶ Minimizes use of power to maintain stable platform. ● Wing: <ul style="list-style-type: none"> ▶ Maintains approximate FTI parameters according to other duties. ▶ Minimizes use of power to maintain proper position. ▶ Properly uses pursuit curves to maintain position. ▶ Does not exceed 60° AOB.
120. Cruise Maneuvering	
<ul style="list-style-type: none"> ● Perform cruise maneuvering sequence. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Smoothly maneuvers IAW FTI parameters. ▶ Minimizes use of power to maintain stable platform. ● Wing: <ul style="list-style-type: none"> ▶ Maintains approximate cruise position according to lead's bank angle. ▶ Minimizes use of power to maintain proper position. ▶ Properly uses pursuit curves to maintain position.

BEHAVIOR STATEMENT	STANDARDS
121. Tail-Chase	
<ul style="list-style-type: none"> ● Perform tail-chase maneuvering as lead or wing. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Smoothly maneuvers IAW FTI parameters. ▶ Monitors wing. ● Wing: <ul style="list-style-type: none"> ▶ Recognizes changes in aspect, bearing line, closure, and range. ▶ Correctly establishes lead/lag/pure pursuit to maintain 600-800 feet nose-to-tail position. ▶ Minimizes use of power to maintain position.
122. G-Awareness Exercise	
<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Conduct two G-awareness turns IAW FTI with formation, each consisting of a 180° constant G turn. ● Wing: <ul style="list-style-type: none"> ▶ Perform G-awareness turn when lead commands. 	<ul style="list-style-type: none"> ● Conducts G-awareness turn IAW FTI. ● Conducts G-awareness turn IAW FTI.
123. Air Force (AF) Closed Pattern	
<ul style="list-style-type: none"> ● Execute AF closed pattern per the FTI. 	<ul style="list-style-type: none"> ● Maintains pattern altitude ±50 feet. ● Maintains pattern airspeed ±5 knots. ● Arrives at the perch in accordance with FTI procedures. ● Rolls out on final on centerline with 1500-3000 feet of straightaway.

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Chapter IX

Master Materials List

Individually Issued Materials

<u>NOMENCLATURE</u>	<u>IDENTIFICATION</u>	<u>QTY PER STUDENT</u>
Flight Training Instruction, Primary Contact, T-34C	CNATRA P-330 (Rev. 6-03)	1

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