

NAVAL AIR TRAINING COMMAND



**NAS CORPUS CHRISTI, TEXAS
CIN O-2A-0107.O-2A-0110**

CNATRAINST 1542.61L

CHIEF OF NAVAL AIR TRAINING



PRIMARY FLIGHT INSTRUCTOR TRAINING 2006



DEPARTMENT OF THE NAVY

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

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N712
04 AUG 2006

CNATRA INSTRUCTION 1542.61L

Subj: PRIMARY FLIGHT INSTRUCTOR CURRICULUM

1. Purpose. To issue the curriculum for qualifying naval aviators/military pilots to instruct student military aviators in the Primary phase of training.
2. Cancellation. CNATRAINST 1542.61K.
3. Action. This instruction is effective on receipt. No changes will be made without written authorization of the Chief of Naval Air Training (CNATRA).
4. Forms. The Aviation Training Forms required by this directive are automated in the TMS2 and STASS Flight computer programs. This system has been assigned a system form number of CNATRA 1542/1497. An update of these forms shall be accomplished no later than the issuance of this curriculum.

D. B. Grimland

D. B. GRIMLAND
Chief of Staff

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COURSE DATA

1. Course Title. Primary Flight Instructor Training.
2. Course ID Number. Primary Flight Instructor Training, Q-2A-107; Rotary-to-Strike Transition, Q-2A-0110.
3. Location(s). NAS Corpus Christi, TX 78419-5021 and NAS Whiting Field, Milton, FL 32510-6155.
4. Course Status. Active.
5. Course Mission. Primary Flight Instructor Training is designed to provide designated naval aviators and military pilots with the appropriate flight procedures, instructional methodology, and techniques to instruct undergraduate flight students in the Primary phase of flight training. The Rotary-to-Strike Transition Syllabus is designed for fleet rotary wing aviators selected for strike transition training. Requests for amendments or deviations to this instruction shall be forwarded to the Chief of Naval Air Training (N71).
6. Prerequisite Training. Designated naval aviator/military pilot.
7. Security Clearance Required. None.
8. Follow-on Training. As required to maintain currency.
9. Course Length. TRAWING Commanders are directed to provide the course of instruction contained herein to include a minimum full qualification in the NATOPS, Contact, Navigation, and Instrument stages. Overall time to train is calculated in accordance with CNATRAINST 1550.6E. Training days are as follows:

Initial	66
Rotary-to-Strike Transition	26
10. Class Capacity. Variable.
11. Instructor Requirements. One flight instructor per eight military aviators undergoing this training.
12. Course Curriculum Model Manager. Commander Training Air Wing FOUR (COMTRAWING FOUR).
13. Quota Management Authority. Chief of Naval Air Training.
14. Quota Control. Chief of Naval Operations.

15. Course Training Subjects

a. Initial Ground Training

ADMINISTRATION		
Stage	Symbol	Hours
Check-In	G0101	2.5
Checkout	G0121	0.5
Totals		3.0

INITIAL GROUND TRAINING		
Stage	Symbol	Hours
Bailout Trainer (Class/Trainer)	G0102-3	2.0
Emergency Procedures (CAI)	G0105-10	6.0
Emergency Procedures Exam	G0112	1.0
Aviation Safety Program (MIL)	G0113	1.0
GLOC/GTIP (MIL)	G0114	1.0
Course Rules (MIL)	G0116	5.0
Course Rules Exam	G0117	1.0
Spin Familiarization Open Book Exam	G0120	1.0
NATOPS Open Book Exam	G0801	3.0
NATOPS Closed Book Exam	G0802	2.0
T-34C Aircraft Systems (Lecture)	G1001-4	23.0
T-34C Aircraft Systems Exam	G1005	1.5
Flight Rules and Regulations (Workbook)	G1007	3.0
Flight Rules and Regulations Exam	G1008	1.0
T-34 Aerodynamics (Workbook)	G1009	2.0
T-34 Aerodynamics Exam	G1010	1.0
Crew Resource Management (MIL)	G1011	3.0
NATOPS Instrument Ground School/IRATS (MIL)	G1012	6.0
NATOPS Instrument Ground School/IRATS Exam	G1013	2.0
Flight Instructor Training Course (FITC)	G1014	26.0
Totals		91.5

b. Initial Flight Support

INITIAL FLIGHT SUPPORT		
Stage	Symbol	Hours
NATOPS Flight 0	C7000	1.5
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
Day Contact Flight Procedures Exam	C0301	1.0
Night Contact Flight Procedures Exam	C0302	1.0
Out-of-Control Flight Procedures Exam	C0401	1.0
Basic Instrument Flight Procedures (CAI)	I0101-4	4.0
Radio Instrument Flight Procedures I (CAI/MIL)	I0302-7	11.0
GPS Procedures (CAI)	I0308	1.0
GPS Flight Planning Problems (Learning Center)	I0309	1.0
Radio Instrument Flight Procedures II (MIL)	I0310	3.0
Instrument Stage Flight Procedures Exam	I0311	2.0
Navigation Flight Procedures (CAI/MIL)	N0101-8	6.0
Navigation Flight Procedures Exam	N0109	1.0
Totals		41.7

c. Initial Flight Training

INITIAL FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Cockpit Procedures Training	3	3.9				
NATOPS			2	2.6	6	12.9
Day Contact					10	20.8
Standardization Day					1	2.3
Contact Check Ride					1	1.8
Night Contact					1	1.6
Standardization Night					1	1.6
Contact Check Ride			2	2.6	2	4.0
Basic Instruments			3	3.9	8	16.6
Radio Instruments					1	2.5
Standardization Instrument Check Ride					1	2.0
NATOPS Instrument Check Ride					2	3.0
Day Navigation					2	3.0
Night Navigation					2	3.0
Totals	3	3.9	7	9.1	35	70.5

d. Upgrade Flight Support

BASIC FORMATION FLIGHT SUPPORT		
Stage	Symbol	Hours
Basic Formation Flight Procedures (MIL)	F0101	3.0
Basic Formation Exam	F0103	1.0
Totals		4.0

CRUISE FORMATION FLIGHT SUPPORT		
Stage	Symbol	Hours
Cruise Formation Flight Procedures (MIL)	F0201	2.0
Cruise Formation Flight Procedures Exam	F0202	1.0
Totals		3.0

STANDARDIZATION OCF FLIGHT SUPPORT		
Stage	Symbol	Hours
Out-of-Control Flight Procedures Exam	C0401	1.0
Totals		1.0

AF FORMATION FLIGHT SUPPORT		
Stage	Symbol	Hours
AF Formation Flight Procedures (MIL)	F0301	2.0
AF Formation Exam	F0302	1.0
Totals		3.0

e. Upgrade/Annual Flight Training

BASIC FORMATION FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Basic Formation					5	10.0
Standardization Basic Formation Check Ride					1	2.0
Totals					6	12.0

CRUISE FORMATION FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Cruise Formation					2	4.0
Standardization Cruise Formation Check Ride					1	2.0
Totals					3	6.0

ANNUAL EP FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
EP Trainer	1	1.3				
Totals	1	1.3				

STANDARDIZATION OCF FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Standardization Out-of-Control Flight					1	2.0
Standardization OCF Check Ride					1	2.0
Totals					2	4.0

AF FORMATION FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
AF Formation					5	10.0
Standardization AF Formation Check Ride					1	2.0
Totals					6	12.0

f. Rotary-to-Strike Transition Ground Training

ROTARY-TO-STRIKE TRANSITION ADMINISTRATION		
Stage	Symbol	Hours
Check-In	G0101	2.5
Checkout	G0121	0.5
Totals		3.0

ROTARY-TO-STRIKE TRANSITION GROUND TRAINING		
Stage	Symbol	Hours
Bailout Trainer (Class/Trainer)	G0102-3	2.0
Emergency Procedures (CAI)	G0105-10	6.0
Emergency Procedures Exam	G0112	1.0
Course Rules (MIL)	G0116	5.0
NATOPS Open Book Exam	G0801	3.0
T-34C Aircraft Systems (Lecture)	G1001-4	23.0
T-34C Aircraft Systems Exam	G1005	1.5
Totals		41.5

g. Rotary-to-Strike Transition Flight Support

ROTARY-TO-STRIKE TRANSITION FLIGHT SUPPORT		
Stage	Symbol	Hours
Contact (CAI)	C0101-2	0.9
	C0107-10	3.2
Basic Instrument Flight Procedures (CAI)	I0101-4	4.0
Basic Formation Flight Procedures (MIL)	F0101	3.0
Totals		11.1

h. Rotary-to-Strike Transition Flight Training. No solo events are authorized. Transition pilots are not required to meet EOB MIF standards.

ROTARY-TO-STRIKE TRANSITION FLIGHT TRAINING						
Flight/Events	CPT		SIM		T-34C Dual	
	Flts	Hrs	Flts	Hrs	Flts	Hrs
Cockpit Procedures	3	3.9				
NATOPS			1	1.3	3	6.4
Instruments					2	4.0
Day Contact					3	6.0
Basic Formation					2	4.0
Cruise Formation					2	4.0
Totals	3	3.9	1	1.3	12	24.4

16. Training Time Analysis. The following table shows the additional training contact time involved for each programmed curriculum hour, flight, or simulator event. The figures represent the minimum average time an Instructor Under Training (IUT) is involved in the direct learning process, either in preparation for, or utilizing, training equipment.

ADDITIONAL TRAINING TIME PER CURRICULUM HOUR/EVENT				
Training Area	Brief/Preflight/ Taxi	Prep Study	Taxi/ Debrief	Total
Flight	1.95	2.0	1.00	4.95
Simulator/CPT	0.50	2.0	0.50	3.00
Academic and Flight Support	0.25		0.25	0.50

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

18. Obligated Service. Refer to MILPERSMAN Article 661036 for naval personnel.

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

20. Preceding Curriculum Data. Replaces CNATRAINST 1542.61K.

21. Student Performance Measurement/Application of Standards. The standards outlined in Chapter IX, 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 to assess the environmental and systems factors affecting the condition under which the performance is measured and the student's experience within the stage.

ABBREVIATIONS

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

- a. AERO - Aerodynamics
- b. AF - Air Force
- c. AFB - Air Force Base
- d. AFORMFP - Air Force Formation Flight Procedures
- e. AGL - Above Ground Level
- f. AGSM - Anti-Gravity Straining Maneuver
- g. AOA - Angle of Attack
- h. AOB - Angle of Bank
- i. ASI - Aviation Student Indoctrination
- j. ASR - Airport Surveillance Radar
- k. ATC - Air Traffic Control
- l. ATF - Aviation Training Form
- m. ATS - Aviation Training Summary or Approach Turn Stall
- n. BAC - Basic Aircraft Control
- o. BAW - Basic Air Work
- p. BIFP - Basic Instruments Flight Procedures
- q. BOT - Bailout Trainer
- r. CABT - Constant Angle of Bank Turn
- s. CAI - Computer-Assisted Instruction
- t. CDI - Course Deviation Indicator
- u. CFORMFP - Cruise Formation Flight Procedures
- v. CNATRA - Chief of Naval Air Training
- w. CO - Commanding Officer
- x. CPT - Cockpit Procedures Trainer
- y. CR - Course Rules

z.	CRM	-	Crew Resource Management
aa.	CTAF	-	Common Traffic Advisory Frequency
ab.	CTS	-	Course Training Standard
ac.	DCONFP	-	Day Contact Flight Procedures
ad.	DH	-	Decision Height
ae.	DME	-	Distance Measuring Equipment
af.	DP	-	Departure Procedures
ag.	ELP	-	Estimated Landing Point
ah.	EMFP	-	Emergency Flight Procedures
ai.	EOB	-	End of Block
aj.	EP	-	Emergency Procedure
ak.	EPL	-	Emergency Power Lever
al.	ETA	-	Estimated Time of Arrival
am.	ETE	-	Estimated Time Enroute
an.	F/C	-	Front Cockpit
ao.	FAA	-	Federal Aviation Administration
ap.	FAF	-	Final Approach Fix
aq.	FAWP	-	Final Approach Waypoint
ar.	FFA	-	Full-Flap Approach
as.	FFL	-	Full-Flap Landing
at.	FIH	-	Flight Information Handbook
au.	FITC	-	Flight Instructor Training Course
av.	FITU	-	Flight Instructor Training Unit
aw.	FLIP	-	Flight Information Publication
ax.	FORMFP	-	Formation Flight Procedures
ay.	FP	-	Full Panel
az.	FPM	-	Feet Per Minute
ba.	FRR	-	Flight Rules and Regulations

bb.	FTI	-	Flight Training Instruction
bc.	FWOP	-	Fixed-Wing Operating Procedures
bd.	GCA	-	Ground-Controlled Approach
be.	GLOC	-	G-Induced Loss of Consciousness
bf.	GPS	-	Global Positioning System
bg.	GPSFP	-	Global Positioning System Flight Procedures
bh.	GPU	-	Ground Power Unit
bi.	GTIP	-	G-Tolerance Improvement Program
bj.	HAPL/P	-	High Altitude Power Loss/Pattern
bk.	HEFOE	-	Hydraulic, Electrical, Fuel, Oxygen, Engine
bl.	HFE	-	Home Field Entry
bm.	IAF	-	Initial Approach Fix
bn.	IAP	-	Initial Approach Procedure
bo.	IAW	-	In Accordance With
bp.	ICA	-	Initial Climb to Altitude
bq.	IFR	-	Instrument Flight Rules
br.	IFT	-	Instrument Flight Trainer
bs.	IMC	-	Instrument Meteorological Conditions
bt.	IP	-	Instructor Pilot
bu.	IPC	-	Initial Progress Check
bv.	IRATS	-	Instrument Rating System
bw.	ITF	-	Instructor Training Form
bx.	ITT	-	Interstage Turbine Temperature
by.	ITU	-	Instructor Training Unit
bz.	IUT	-	Instructor Under Training
ca.	KIAS	-	Knots Indicated Airspeed
cb.	LAPL/P	-	Low Altitude Power Loss/Pattern

cc.	LSC	-	Level Speed Change
cd.	MAP	-	Missed Approach Point
ce.	MDA	-	Minimum Descent Altitude
cf.	MIF	-	Maneuver Item File
cg.	MIL	-	Mediated Interactive Lecture
ch.	MOA	-	Military Operating Area
ci.	MPTS	-	Multi-Service Pilot Training System
cj.	NACWS	-	Naval Aviation Collision Warning System
ck.	NAS	-	Naval Air Station
cl.	NATOPS	-	Naval Air Training Operating Procedures Standardization
cm.	NAVAID	-	Navigational Aid
cn.	NAVFP	-	Navigation Flight Procedures
co.	NCONFP	-	Night Contact Flight Procedures
cp.	NFA	-	No-Flap Approach
cq.	NFL	-	No-Flap Landing
cr.	NM	-	Nautical Mile(s)
cs.	NLT	-	No Later Than
ct.	OCF	-	Out-of-Control Flight
cu.	OCFFP	-	Out-of-Control Flight Flight Procedures
cv.	OIC	-	Officer in Charge
cw.	OLF	-	Outlying Field
cx.	OPNAV	-	Office of the Chief of Naval Operations
cy.	OPS	-	Operations
cz.	ORM	-	Operational Risk Management
da.	OSI	-	Over the Station Intercepts
db.	PAR	-	Precision Approach Radar
dc.	PCL	-	Power Control Lever

dd. PEL - Precautionary Emergency Landing
de. POS - Power Off Stall
df. PP - Partial Panel
dg. PPEL/P - Practice Precautionary Emergency
Landing/Pattern
dh. PTP - Point-to-Point
di. R/C - Rear Cockpit
dj. R&E - Radio and Equipment
dk. RAIM - Receiver Autonomous Integrity Monitor
dl. RI - Radio Instruments
dm. RIFP - Radio Instruments Flight Procedures
dn. RMI - Radio Magnetic Indicator
do. RPM - Rotations Per Minute
dp. RVFAC - Radar Vectors to Final Approach Course
dq. S&L - Straight and Level
dr. SFMCM - Slow Flight/Minimum Control Maneuver
ds. SFS - Safe-for-Solo
dt. SI - Standardization Instructor
du. SMA - Student Military Aviator
dv. SOCF - Standardization Out-of-Control Flight
dw. SOP - Standard Operating Procedure
dx. SSR - Special Syllabus Requirement
dy. STARS - Standard Terminal Arrivals
dz. STS - Skidded Turn Stall
ea. SYS - Systems
eb. TACAN - Tactical Air Navigation
ec. UA - Unusual Attitude
ed. UHF - Ultra High Frequency

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ef. USAF - United States Air Force
eg. VFR - Visual Flight Rules
eh. VHF - Very High Frequency
ei. VMC - Visual Meteorological Conditions
ej. VNAV - Visual Navigation
ek. VOR - VHF Omnidirectional Range
el. XO - Executive Officer

GLOSSARY

1. Advancing X. Completed event within the normal syllabus flow. Excludes events with last characters in the range 86-89.
2. Aviation Training Summary. A tabular sheet listing the Maneuver Item File (MIF) and maneuver grades within a training stage.
3. 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.
4. Check Ride (SXX90). A flight check in any stage of training.
5. Contact. The stage of training that combines day and night flight familiarization, aerobatics maneuvers, and out-of-control flight procedures.
6. Course of Training. The entire program of preflight, flight, simulation, academics, and officer development conducted in all media during the programmed training days.
7. Course Training Standard. A description of required behaviors and standards of performance for a specific maneuver. These standards are in Chapter IX.
8. Courseware. The technical data, FTIs, audio, video, film, CAI, instructor guides, student study guides, and other training material developed to support and implement the syllabus of instruction.
9. 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.
10. Fixed-Wing Operating Procedures Manual. A training wing directive describing standard operating procedures for local fixed-wing aircraft.
11. Flight Training Instruction. A CNATRA-approved manual describing flight procedures and techniques for each training stage.
12. Hours per X (H/X). The average length for each event in a block, rounded to the nearest tenth of an hour.
13. Instructor Training Form. A grade sheet documenting IUT performance for all categories of training regardless of media, phase, or stage.

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

Char	Meaning	Remarks
1 st	Stage	G—Ground I—Instrument F—Formation C—Contact N—Navigation
2 nd	Media	0—Ground event 4—Simulator (IUT) 1—Academics 5—Aircraft (IUT) 2—CPT/Simulator 6—Simulator (NATOPS) 3—N/A 7—Aircraft (NATOPS)
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: 86—Warmup 89—Final Progress Check 87—Extra training 90—Check Ride 88—Initial Progress Check

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

16. Master Syllabus. Chapters I-VIII list all training syllabus activities, prerequisites, and desired training flow.

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

18. 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).

19. Standardization Instructor. The squadron commander/FITU OIC will designate SIs for each stage.

20. Training Media. The media for this syllabus includes aircraft, IFTs, CPTs, ground training, and CAI. The second character in the lesson identifier designates the training media.

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 course of action appears to conflict with other directives, consult CNATRA (N71).
- c. Deviations. Document all deviations on the event's ITF.
- d. Changes. Recommended changes shall be submitted IAW CNATRAINST 1550.6E.
- e. Syllabus Description. The syllabus is divided into stages; the stages are grouped by flight training regimes such as Contact, Instrument, Formation, and Navigation flights. Each stage is subdivided into training blocks. The training blocks consist of a specified number of flights. Course Training Standards are modified by the MIFs to identify the acceptable level of performance that must be achieved at the completion of each training block.

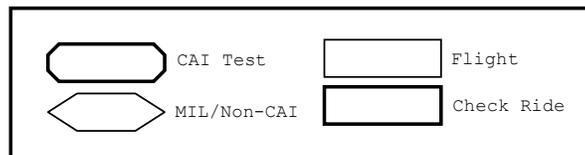
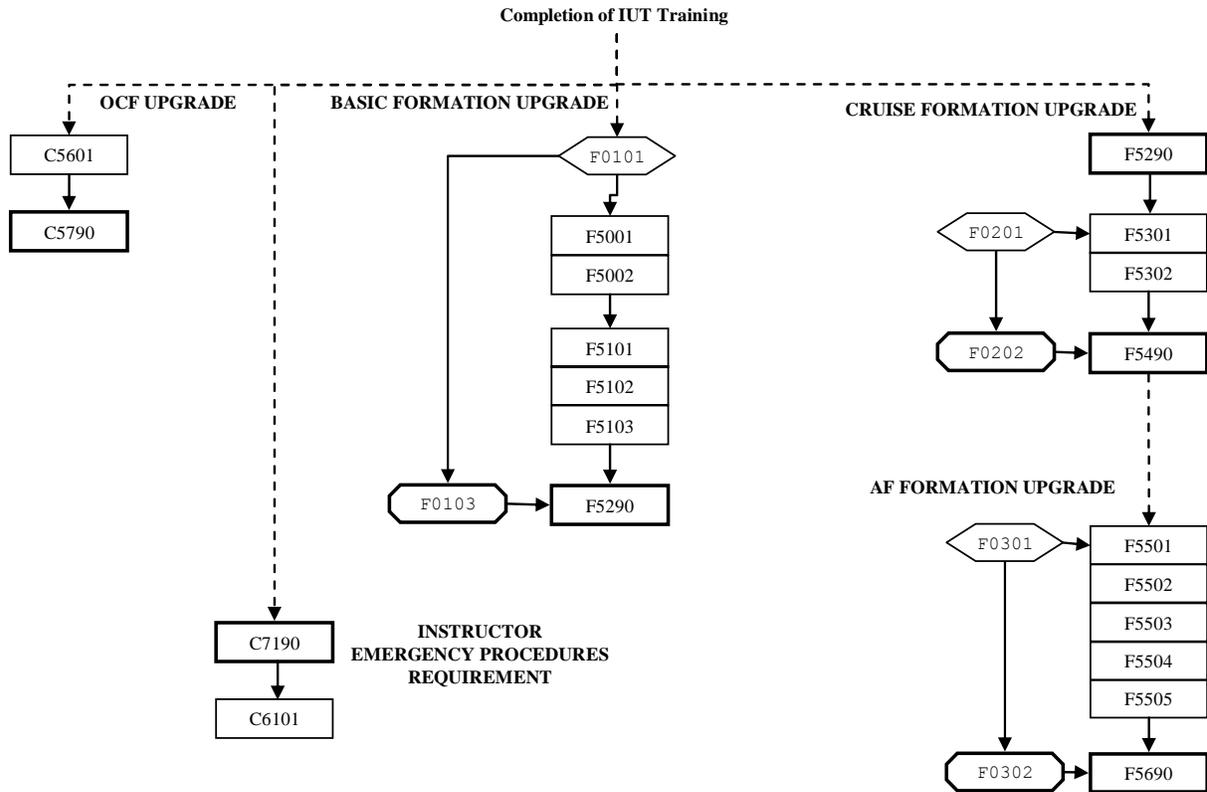
2. Training Management

- a. Syllabus Progression. Fly events within each stage sequentially, except as noted. Do not start a block without all prerequisites. IUTs may be in different stages simultaneously. Where applicable, IUTs shall be prepared, and will be eligible, for both a Contact and an Instrument syllabus event. IUTs must complete all events, unless approved for acceleration. The assigned squadron Instructor Training Unit (ITU) will maintain administrative control over the transition pilot and will be responsible for all scheduling of events for the Rotary-to-Strike Transition syllabus. System training management is designed to facilitate two graded events (flight, simulator, or exam) per IUT/transition student per day.
- b. Maneuver Continuity. IUTs must accomplish previously introduced maneuvers frequently enough to ensure maintaining required proficiency.
- c. H/X. Standardization 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 ITF's general comment section.

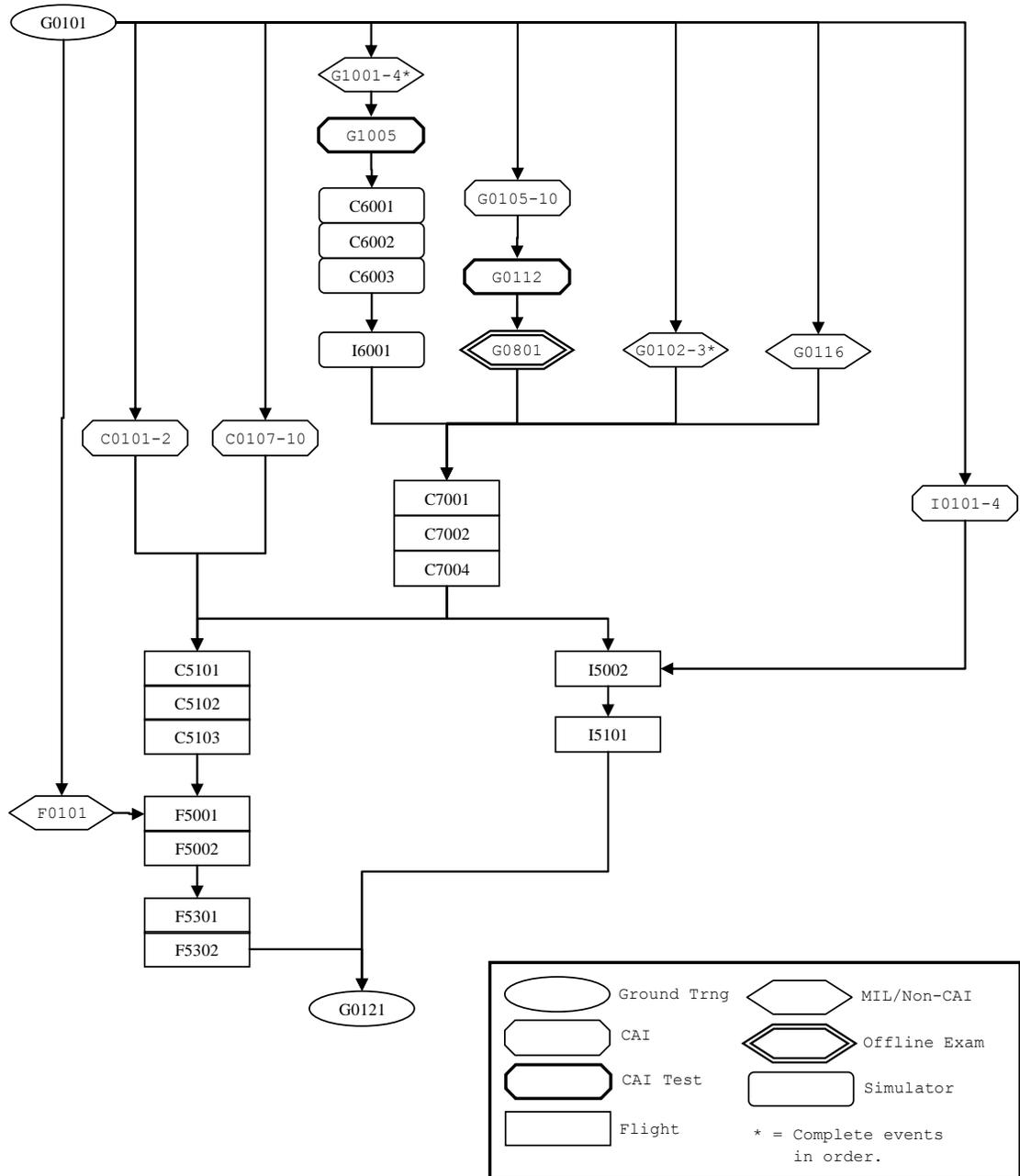
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d. Special Syllabus Requirements. SSRs are allocated to flights. Unless noted otherwise, SIs may accomplish SSRs on any flight within the block. SSRs shall be completed in the specified block. Annotate completed SSRs in the ITF's SSR comments section.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

UPGRADES/INSTRUCTOR REQUIREMENT
FLOW CHART



ROTARY-TO-STRIKE TRANSITION
FLOW CHART



3. Ground Training and Briefing Requirements

a. Mission Preparation, Briefings, and Debriefings

(1) EOB Events. The SI 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. The IUT shall arrive for each flight with:

(a) Thorough knowledge of:

1. The flight's discuss items as listed in Chapters III-VII.

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

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

(c) The latest ATS for the stage.

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

(a) Event discuss items, as listed in Chapters III-VII.

(b) Specific objectives.

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

(d) Planned profile, contingencies, and ORM considerations.

(4) Debriefing

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

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

(c) The SI shall provide the IUT or transition student with a new ATS, and may provide a copy of the event's ITF.

4. Mission Grading Procedures and Evaluation Policies

a. General Evaluation Policy. CTSS listed in this instruction and the MIFs are minimum stage/phase completion standards per maneuver. CTSS/MIFs are designed to allow for minimum performance in a specific area with the understanding that performance above the minimum CTS/MIF will offset the weak area.

b. Grading Procedures (Aircraft and Training Devices)

(1) Overall Grading

(a) The overall grade for all flight and device events, with the exception of the NATOPS Check Ride, will be pass/fail.

(b) The overall grade for the NATOPS Check Ride will be UQ, CQ, or Q as described below:

1. Unqualified (UQ Level) - Fails to meet minimum acceptable criteria and needs supervised instruction.

2. Conditionally Qualified (CQ Level) - Meets minimum acceptable criteria and is safe to fly as the Mission Commander.

3. Qualified (Q Level) - Displays good knowledge of operational procedures and a thorough understanding of the aircraft.

(2) Standard Maneuver Grading. Use the following grading scale to document the IUT's characteristic performance on all flight and device maneuvers attempted during each dual event, with the exception of maneuvers done during the NATOPS phase of training. This is an absolute grading scale. Judge the IUT's proficiency **only** against the item's course training standard.

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

1. When the SI demonstrates the maneuver and the IUT does not subsequently perform it during the event.

2. To indicate accomplishing SSRs. Specify the completed SSRs in the ITF's SSR comments section.

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

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

(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 IUT and are appropriate, smooth, and rapid.

(3) NATOPS Maneuver Grading. During the NATOPS phase of training, grading will be IAW NATOPS standards. This applies to the following syllabus training events:

C7001	C7003	C7005	C6101
C7002	C7004	C7190	

Judge the IUT's proficiency only against the item's CTS or NATOPS grading criteria. The grading scale will be as per the NATOPS as listed below:

5 = Not applicable to NATOPS Block Training
4 = Q
3 = CQ
2 = UQ
1 = Demonstrate

Corresponding Course Training Standards will reference NATOPS.

(4) Progression Rule. Performance must meet MIF by the end of block. IUT shall maintain or exceed MIF performance from one block, stage, or media to the next.

(5) Maneuver Requirements. For each block:

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

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

5. Incomplete Events. In general, SIs 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 SI 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 an IUT 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. 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. An event may both complete a previous event and count as an advancing X.

c. Simulator Event Completion. Assess a simulator event complete if the IUT or student has received a full 1.3-hour training period.

6. Policies for Evaluation Flights and Ground Evaluations

a. Check Rides (SXX90). Check rides amount to single event, training blocks. Therefore, all rules regarding progressing out of a block apply, except as noted below:

(1) 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) SI may allow IUT to reaccomplish maneuvers.

(4) The entire event should be devoted to assessing the IUT'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.

(5) The IUT should be able to demonstrate required levels of proficiency without SI assistance. However, instruction is allowed on check rides, and IUTs may reaccomplish maneuvers at the SI's discretion.

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

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

(2) The SI was unable to sample sufficient examples of a given maneuver to assess the IUT'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.

7. Special Instructions and Restrictions

a. Schedule limitations for IUTs will be left to the discretion of the ITU or cognizant squadron, but consistent with the provisions of OPNAVINST 3710.7T.

b. All IUT flights will be conducted in accordance with the current T-34C NATOPS, FTI, and local SOP. No deviations from standard maneuvers are authorized except in cases of emergency.

c. Completion of the NATOPS stage as described in this instruction meets the NATOPS qualification requirements for the T-34C aircraft.

d. Reasonable accelerations and decelerations in the curriculum are authorized when warranted by previous experience or demonstrated ability. During the accelerated period, the IUT may progress to the next block of training once MIF is met within the current block of training. Accelerations of the curriculum require TRAWING commander approval and shall be annotated in writing in the Instructor Training Jacket.

e. The word "introduction" following the maneuver means the maneuver must be performed with an accompanying description. In those cases requiring a maneuver description, it need not be memorized exactly, but must convey the full meaning.

Chapter II

Ground Training

Block	Media	Title	Events	Hrs	Stage
G01	Class	NATOPS Qualification Training	16	21.0	See Below

1. Events

G0101	Sqdn	Check-In. IUT will check in with Squadron. This block includes Publications Issue and Flight Gear Fitting.		2.5	ASI
G0102	MIL	Bailout Lecture		1.0	ASI
G0103	BOT	Bailout Trainer		1.0	ASI
G0105	CAI	Introduction to Emergency Procedures		0.5	EMFP
G0106	CAI	Ground Emergencies		1.0	EMFP
G0107	CAI	Takeoff Emergencies		0.5	EMFP
G0108	CAI	In-Flight Emergencies		2.5	EMFP
G0109	CAI	Landing Emergencies		1.0	EMFP
G0110	CAI	Bailout and Ditching		0.5	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
G0116	MIL	Course Rules		5.0	CR
G0117	CAI	Course Rules Exam Test		1.0	CR
G0120	CAI	Spin Familiarization Open Book Exam Test		1.0	OCFFP
G0121	Sqdn	Checkout		0.5	ASI

2. Syllabus Notes

a. G0113, G0114, G0117, and G0120 are not completed by Rotary-to-Strike students.

b. Complete G0101 prior to G0102, G0105-10, G0113-14, G0116, and G0120.

c. Complete G0102-3 in order.

- d. Complete G0105-10 in any order prior to G0112.
 - e. Complete G0116 prior to G0117.
 - f. IUTs shall complete G1014, C5590, C5390, N5002, I5490, and I5590 prior to G0121. For Rotary-to-Strike, students shall complete F5302 and I5101 prior to G0121.
3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
G08	Class	NATOPS Qualification Training	2	5.0	NATOPS

1. Events

G0801 P/P NATOPS Open Book Exam 3.0
Exam

G0802 P/P NATOPS Closed Book Exam 2.0
Exam

2. Syllabus Notes

a. Complete G0112 prior to G0801.

b. Complete G0801 prior to G0802.

c. Rotary-to-Strike students do not take G0802.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
G10	Class	NATOPS Qualification Training	13	68.5	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
G1007	Wbk	Flight Rules and Regulations		3.0	IFR
G1008	CAI Test	Flight Rules and Regulations Exam		1.0	IFR
G1009	Wbk	T-34 Aerodynamics		2.0	AERO
G1010	CAI Test	T-34 Aerodynamics Exam		1.0	AERO
G1011	MIL	Crew Resource Management		3.0	ASI
G1012	MIL	NATOPS Instrument Ground School/IRATS		6.0	IFR
G1013	CAI Test	NATOPS Instrument Ground School/IRATS Exam		2.0	IFR
G1014	MIL	FITC		26.0	ASI

2. Syllabus Notes

a. Rotary-to-Strike students do not take G1007-8, G1009-10, G1011, G1012-13, and G1014.

b. Complete G0101 prior to G1001, G1007, G1009, G1011, and G1014.

c. Complete G1001-5 in order.

d. Complete G1007-8 in order.

e. Complete G1009-10 in order.

f. Complete G1011-13 in order.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C70	Class	NATOPS Qualification Training	1	1.5	ASI

1. Events

C7000 Sqdn NATOPS Flight 0 1.5 ASI

2. Syllabus Notes

- a. Complete I6002 and G0102 prior to C7000.
- b. Rotary-to-Strike students do not take C7000.
- c. C7000. IUT shall demonstrate preflight, postflight, cockpit introduction (to include strapping in, helmet hookup, and operation of O₂ mask), and emergency egress.

3. Discuss Items

C7000

Discuss scheduling, brief and debrief, flight gear check, aircraft issue, weight and balance, yellow sheet, aircraft discrepancy reporting, Course Training Standards, exams, CPT/simulator requirements, flight training instruction reference material, and NACWS operation/limitations.

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

2. Syllabus Notes

- a. Rotary-to-Strike students do not take C0103-6 or C0111.
- b. Lectures and CAIs are interchangeable and do not serve as a prerequisite for the other, except where noted.
- c. Complete G0101 prior to all CAI.

3. Discuss Items. None.

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

1. Events

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

2. Syllabus Notes

- a. Complete G0101 prior to C0201.
- b. Complete C0201-2 in order.
- c. Rotary-to-Strike students do not take C0201-02.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C03	Class	Contact Ground Training	2	2.0	See Below

1. Events

C0301	CAI Test	Day Contact Flight Procedures Exam		1.0	DCONFP
C0302	CAI Test	Night Contact Flight Procedures Exam		1.0	NCONFP

2. Syllabus Notes

- a. Rotary-to-Strike students do not take C0301-02.
- b. Complete C0101-10 prior to C0301.
- c. Complete C0111 prior to C0302.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
C04	Class	Contact Ground Training	1	1.0	OCFFP

1. Events

C0401	CAI Test	Out-of-Control Flight Procedures Exam		1.0	
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2. Syllabus Notes

- a. Complete G0101 prior to C0401.
- b. Rotary-to-Strike students do not take C0401.

3. Discuss Items. None.

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

1. Events

I0101	CAI	Basic Instrument Flight Procedures 1		1.0	
I0102	CAI	Basic Instrument Flight Procedures 2		1.0	
I0103	CAI	Basic Instrument Flight Procedures 3		1.0	
I0104	CAI	Basic Instrument Flight Procedures 4		1.0	

2. Syllabus Notes

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

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
I03	Class	Instruments Ground Training	10	18.0	See Below

1. Events

I0302	CAI	NAVAID Positioning		1.3	RIFP
I0303	CAI	Holding		1.1	RIFP
I0304	MIL	Radio Instrument Flight Procedures I, Part 1		3.0	RIFP
I0305	CAI	TACAN Point-to-Point		1.3	RIFP
I0306	CAI	TACAN Arcing		1.3	RIFP
I0307	MIL	Radio Instrument Flight Procedures I, Part 2		3.0	RIFP
I0308	CAI	GPS Procedures		1.0	GPSFP
I0309	Lab	GPS Flight Planning Problems		1.0	GPSFP
I0310	MIL	Radio Instrument Flight Procedures II		3.0	RIFP
I0311	CAI Test	Instrument Stage Flight Procedures Exam		2.0	IFR

2. Syllabus Notes

- a. Rotary-to-Strike students do not take I03 block.
- b. Lectures and CAIs are interchangeable and do not serve as a prerequisite for the other.
- c. Complete G0101 prior to all CAI, MILs, and Lab.
- d. I0101-4 and I0302-10 shall be completed prior to I0311.

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	Federal Aviation Regulations I		0.5	
N0103	CAI	Federal Aviation Regulations 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 Flight Procedures Exam		1.0	

2. Syllabus Notes

- a. Rotary-to-Strike students do not take N01 block.
- b. Lectures and CAIs are interchangeable and do not serve as a prerequisite for the other, except where noted.
- c. Complete G0101 prior to all CAI.
- d. Complete N0101-08 prior to N0109.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
F01	Class	Basic Formation Ground Training	2	4.0	FORMFP

1. Events

F0101	MIL	Basic Formation Flight Procedures		3.0	
F0103	CAI Test	Basic Formation Exam		1.0	

2. Syllabus Notes

- a. Rotary-to-Strike students do not take F0103.
- b. Complete events in order after completion of IUT Syllabus.
- c. Complete G0101 prior to F0101 for Rotary-to-Strike.

3. Discuss Items. None.

Block	Media	Title	Events	Hrs	Stage
F02	Class	Cruise Formation Ground Training	2	3.0	CFORMFP

1. Events

F0201	MIL	Cruise Formation Flight Procedures		2.0	
F0202	CAI Test	Cruise Formation Flight Procedures Exam		1.0	

2. Syllabus Notes

a. Complete events in order after completion of IUT syllabus.

b. Rotary-to-Strike students do not take F02 block.

3. Discuss Items. None.

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

1. Events

F0301	MIL	AF Formation Flight Procedures		2.0	
F0302	CAI Test	AF Formation Exam		1.0	

2. Syllabus Notes

a. Complete events in order after completion of IUT syllabus.

b. Rotary-to-Strike students do not take F03 block.

3. Discuss Items. None.

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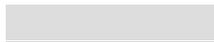
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Chapter III

NATOPS Training

1. Matrices. The following matrix is an overview of the entire NATOPS stage, except C6101. 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.

2. NATOPS Stage MIF

 Simulator/Device Event
 Check Ride Event
 N = NATOPS CTS

NATOPS STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	C6003	I6002	C7005	C7190
1	General Knowledge/Procedures	4+	4+	4+	
2	Emergency Procedures	4+	4+	4+	
3	Headwork/Situational Awareness	4+	4+	4+	
4	Basic Air Work		3+	4+	
N	Personal Flying Equipment				4+
N	NATOPS Flight Manual/Pocket Checklist				4+
N	Flight Preparation				4+
N	Crew/Passenger Briefing				4+
N	Preflight			4+	
N	Aircraft Inspection				4+
N	Start			4+	4+
N	Checklists			4+	4+
N	Pretaxi Checklists				4+
N	Taxi			4+	4+
N	Abnormal Starts	4+			
N	Engine Fire on the Ground (Before Starter Off)	4+			
N	Engine Fire on the Ground (After Starter Off)	4+			
N	Ground Runup			4+	4+

MIF continued on next page.

NATOPS STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	C6003	I6002	C7005	C7190
N	Normal Takeoff			4+	
N	Takeoff Procedures				4+
N	Aborted Takeoff	4+			
N	Engine Failure on Takeoff	4+			
N	Minimum Run Takeoff			4+	4
N	Obstacle Clearance Takeoff			4+	4
N	Departure Procedures		4+		
N	Initial Climb to Altitude			4+	
N	Basic Transitions			4+	
N	Transitions				4+
N	Climb				4+
N	Level Flight				4+
N	Emergency Engine Shutdown	4+			
N	Abnormal ITT During Shutdown	4+			
N	Prop Feather (Unknown Cause)	4+			
N	Flameout	4+			
N	Airstart	4+			
N	Compressor Stall	4+			
N	Engine Fire In-Flight	4+			
N	Engine Failure Over Water/Ditching	4+			
N	Fuel Control Rollback	4+			
N	Electrical/Unknown Origin Fire	4+			
N	Restoring Electrical Power	4+			
N	Smoke or Fume Elimination	4+			
N	Oil System Malfunctions	4+			
N	Engine-Driven or Electrical Fuel Boost Pump Failure	4+			
N	Generator Failure	4+			
N	Inverter Failure	4+			
N	Bleed Air Warning	4+			

MIF continued on next page.

NATOPS STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	C6003	I6002	C7005	C7190
N	Torque Sensing Failure	4+			
N	Prop RPM Out of Limits	4+			
N	Unsafe Gear Indications	4+			
N	Flap Limit Switch Failure	4+			
N	Chip Light	4+			
N	Bailout	4+			
N	Emergency Landing Gear Extension			4+	
N	Use of EPL (At Altitude)			4+	
N	POS			4+	
N	Erect Spin			4+	4+
N	Control Release Spin			4+	4
N	Progressive Spin			4+	4
N	Inverted Flight			4+	4+
N	Zero Airspeed Departure Recovery				4+
N	Cross Control Departure Recovery			4+	4+
N	Aggravated ATS Recovery			4+	4+
N	ATS (Idle Power)			4+	4+
N	STS			4+	4+
N	Aerobatic Maneuvers				4+
N	Loop			4+	
N	Wingover			4+	
N	Barrel Roll			4+	
N	Aileron Roll			4+	
N	Split-S			4+	
N	One-Half Cuban Eight			4+	
N	Immelmann			4+	
N	VFR Unusual Attitudes			4+	
N	PPEL	4+		4+	4+
N	HAPL	4+		4+	4
N	LAPL	4+		4+	4+

MIF continued on next page.

NATOPS STAGE MANEUVER ITEM FILE					
CTS REF	MANEUVER	C6003	I6002	C7005	C7190
N	PPEL/P			4+	4+
N	LAPL/P			4+	4+
N	AOA Approach/FFL			4+	
N	AOA Approach/NFL			4+	
N	Waveoff			4+	
N	Instrument Departure			4+	
N	Holding (VOR)		3+		
N	Fire in Flight				4+
N	System Failure				4+
N	Holding (TACAN or VOR)			4+	4
N	VOR Approaches		3+	4+	
N	IFR Unusual Attitudes (FP/PP)		3+	4+	
N	Non-Precision Approach				4
N	PAR		4+	4+	4
N	No Gyro PAR		4+		
N	No Gyro Approach			4+	
N	ASR		4+	4+	
N	TACAN Approach			4+	
N	TACAN Arcing Approach		3+		
N	Localizer Approach		3+	4+	
N	GPS RVFAC			4+	
N	Landing Checklist				4+
N	Descent				4+
N	Pattern				4+
N	FFL			4+	4+
N	NFL			4+	4+
N	Course Rules				4
N	Engine Shutdown				4+
N	Postflight Inspection				4+
N	Special Syllabus Requirements			1	1

Block	Media	Title	Events	Hrs	H/X
C60	IFT	Cockpit Procedure Training	3	3.9	1.3

1. Prerequisite. G1005 (T-34C Aircraft Systems Exam).
2. Syllabus Notes. The following procedures will be performed by the IUT on the indicated event:

C6001

All normal operating procedures, abnormal start, emergency engine shutdown, engine fire on ground (before starter off), engine fire on ground (after starter off), aborted takeoff, engine failure during takeoff, engine failure over water/ditching, bailout, and abnormal ITT during shutdown.

C6002

All normal operating procedures, engine fire (in-flight), flame-out, airstart, HAPL, LAPL, generator failure, inverter failure, oil system malfunction, chip light, PPEL, engine-driven boost pump failure, bleed air warning light, and compressor stall.

C6003

All normal operating procedures, electrical/unknown origin fire, restoring electrical power, smoke and fume elimination, propeller feathers (unknown cause), prop RPM out of limits, interior lights failure, flap limit switch failure, torque sensing failure, emergency landing gear extension, landing gear unsafe emergency landing, and fuel control rollback.

3. Special Syllabus Requirements. None.
4. Discuss Items

C6001

All normal operating procedures and C6001 required emergency procedures.

C6002

All C6002 required emergency procedures.

C6003

All C6003 required emergency procedures.

5. Block MIF

CTS REF	MANEUVER	C6003
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+

MIF continued on next page.

CTS REF	MANEUVER	C6003
3	Headwork/Situational Awareness	4+
N	Abnormal Starts	4+
N	Engine Fire on the Ground (Before Starter Off)	4+
N	Engine Fire on the Ground (After Starter Off)	4+
N	Aborted Takeoff	4+
N	Engine Failure On Takeoff	4+
N	Emergency Engine Shutdown	4+
N	Abnormal ITT During Shutdown	4+
N	Prop Feather (Unknown Cause)	4+
N	Flameout	4+
N	Airstart	4+
N	Compressor Stall	4+
N	Engine Fire In-Flight	4+
N	Engine Failure Over Water/Ditching	4+
N	Fuel Control Rollback	4+
N	Electrical/Unknown Origin Fire	4+
N	Restoring Electrical Power	4+
N	Smoke or Fume Elimination	4+
N	Oil System Malfunctions	4+
N	Engine-Driven or Electric Fuel Boost Pump Failure	4+
N	Generator Failure	4+
N	Inverter Failure	4+
N	Bleed Air Warning	4+
N	Torque Sensing Failure	4+
N	Prop RPM Out of Limits	4+
N	Unsafe Gear Indications	4+
N	Flap Limit Switch Failure	4+
N	Chip Light	4+
N	Bailout	4+
N	PPEL	4+
N	HAPL	4+
N	LAPL	4+

Block	Media	Title	Events	Hrs	H/X
I60	IFT	NATOPS	2	2.6	1.3

1. Prerequisite. C6003.
2. Syllabus Note. A minimum of two VOR approaches and two VOR holding entries/patterns shall be conducted.
3. Special Syllabus Requirements. None.
4. Discuss Items

I6001

Departure procedures (DP), VOR holding procedures, and VOR approach procedures.

I6002

GCA procedures, partial panel flight, ASR approach, TACAN approach (arcing), and localizer approach.

5. Block MIF

CTS REF	MANEUVER	I6002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	3+
N	Departure Procedures	4+
N	Holding (VOR)	3+
N	VOR Approaches	3+
N	IFR Unusual Attitudes (FP/PP)	3+
N	PAR	4+
N	No Gyro PAR	4+
N	ASR	4+
N	TACAN Arcing Approach	3+
N	Localizer Approach	3+

Block	Media	Title	Events	Hrs	H/X
C70	T-34	NATOPS	5	10.6	
			C7001-3		2.2
			C7004-5		2.0

1. Prerequisites

- a. G0103 (Bailout Trainer).
- b. C7000 (NATOPS Flight 0), IUT only.
- c. G0116 (Course Rules Lecture), Rotary-to-Strike Transition only.
- d. G0801 (NATOPS Open Book Exam), Rotary-to-Strike Transition only.
- e. I6001, Rotary-to-Strike Transition only.

2. Syllabus Notes

- a. All NATOPS flights shall be flown from the front cockpit with the exception of C7003. C7003 will be flown under the hood from the rear cockpit.
- b. C7003 may be flown prior to C7002.
- c. C7004 may be flown prior to C7003.
- d. Control release spin and progressive spin must be completed on C7004 if weather precludes introduction on C7002.
- e. Rotary-to-Strike students not required to fly C7005.

3. Special Syllabus Requirements

C7001

Intentional feather while airborne, slow flight/stall characteristics, and canopy open flight (effect on glide and rate of descent).

C7002

Inverted flight and high-speed spiral demonstration.

C7003

GPS operation.

C7004

Minimum run landing, aborted takeoff, and OCF/unusual attitude recovery.

C7005
Any SSR not previously completed.

4. Discuss Items

C7001
Pre-aerobatic/stall checklist, engine fires (ground and in-flight), electrical/unknown origin fire, bailout, ditching, local area flying procedures, unsafe landing gear position indication, and landing gear unsafe emergency landing.

C7002
Loss of useful power, crosswind takeoff and landing, local area flying procedures, inverted spins, aggravated spins, out-of-control flight recovery procedure, accelerated stalls, and high-speed spiral demonstration.

C7003
Prop RPM out of limits, fuel system failure, electrical failure, instrument departure and arrival, partial panel flight, GPS procedures, GPS flight plans, GPS enroute procedures, and GPS approach (OBS/LEG mode, ARM/ACTIVE mode).

C7004
Engine fire in flight, electrical/unknown origin fire, minimum run landing, aborted takeoff, and OCF/unusual attitude recovery.

C7005
Local area flying procedures, low altitude engine failure considerations, and ground roll/braking distance for PPEL/engine failure to a paved field.

5. Block MIF

CTS REF	MANEUVER	C7005
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
N	Preflight	4+
N	Start	4+
N	Checklists	4+
N	Taxi	4+
N	Ground Runup	4+
N	Normal Takeoff	4+
N	Minimum Run Takeoff	4+
N	Obstacle Clearance Takeoff	4+
N	Initial Climb to Altitude	4+
N	Basic Transitions	4+
N	Emergency Landing Gear Extension	4+
N	Use of EPL (At Altitude)	4+
N	POS	4+
N	Erect Spin	4+
N	Control Release Spin	4+
N	Progressive Spin	4+
N	Inverted Flight	4+
N	Cross Control Departure Recovery	4+
N	Aggravated ATS Recovery	4+
N	ATS (Idle Power)	4+
N	STS	4+
N	Loop	4+
N	Wingover	4+
N	Barrel Roll	4+
N	Aileron Roll	4+
N	Split-S	4+
N	One-Half Cuban Eight	4+
N	Immelmann	4+

MIF continued on next page.

CTS REF	MANEUVER	C7005
N	VFR Unusual Attitudes	4+
N	PPEL	4+
N	HAPL	4+
N	LAPL	4+
N	PPEL/P	4+
N	LAPL/P	4+
N	AOA Approach/FFL	4+
N	AOA Approach/NFL	4+
N	Waveoff	4+
N	Instrument Departure	4+
N	Holding (TACAN or VOR)	4+
N	VOR Approaches	4+
N	IFR Unusual Attitudes (FP/PP)	4+
N	PAR	4+
N	No Gyro Approach	4+
N	ASR	4+
N	TACAN Approach	4+
N	Localizer Approach	4+
N	GPS RVFAC	4+
N	FFL	4+
N	NFL	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
C71	T-34	NATOPS Check Ride	1	2.3	2.3

1. Prerequisites

- a. G0113 (Aviation Safety Program).
- b. G0114 (GLOC/GTIP).
- c. G0117 (Course Rules Exam).
- d. G0120 (Spin Familiarization Open Book Exam).
- e. G0802 (NATOPS Closed Book Exam).
- f. G1008 (FRR Exam).
- g. G1010 (T-34 Aerodynamics Exam).
- h. C7005.

2. Syllabus Notes

- a. Comprehensive check of introduced maneuvers in accordance with section X of the T-34C NATOPS flight manual.
- b. Control Release Spin and Progressive Spin are required if not accomplished within the last 60 days.
- c. To reduce engine wear, zero airspeed departures shall only be accomplished on initial NATOPS checks, and NATOPS instructor/assistant NATOPS instructor upgrade flights.
- d. Discuss procedures for securing the R/C for solo flight.
- e. A minimum of two aerobatic maneuvers shall be conducted.
- f. Members who possess a current instrument rating accomplished in the T-34C are not required to accomplish the instrument procedures graded items.

3. Special Syllabus Requirements. None.

4. Discuss Items. None.

5. Block MIF

CTS REF	MANEUVER	C7190
N	Personal Flying Equipment	4+
N	NATOPS Flight Manual/Pocket Checklist	4+
N	Flight Preparation	4+
N	Crew/Passenger Briefing	4+
N	Aircraft Inspection	4+
N	Start	4+
N	Checklists	4+
N	Pretaxi Checklists	4+
N	Taxi	4+
N	Ground Runup	4+
N	Takeoff Procedures	4+
N	Minimum Run Takeoff	4
N	Obstacle Clearance Takeoff	4
N	Transitions	4+
N	Climb	4+
N	Level Flight	4+
N	Erect Spin	4+
N	Control Release Spin	4
N	Progressive Spin	4
N	Inverted Flight	4+
N	Zero Airspeed Departure Recovery	4+
N	Cross Control Departure Recovery	4+
N	Aggravated ATS Recovery	4+
N	ATS (Idle Power)	4+
N	STS	4+
N	Aerobatic Maneuvers	4+
N	PPEL	4+
N	HAPL	4
N	LAPL	4+
N	PPEL/P	4+
N	LAPL/P	4+
N	Fire in Flight	4+

MIF continued on next page.

CTS REF	MANEUVER	C7190
N	System Failure	4+
N	Holding (TACAN or VOR)	4
N	Non-Precision Approach	4
N	PAR	4
N	Landing Checklist	4+
N	Descent	4+
N	Pattern	4+
N	FFL	4+
N	NFL	4+
N	Course Rules	4
N	Engine Shutdown	4+
N	Postflight Inspection	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
C61	IFT	Annual Emergency Procedures Trainer	1	1.3	1.3

1. Prerequisite. C7190.
2. Syllabus Notes. IP shall complete a minimum of 10 emergencies.
3. Special Syllabus Requirement. None.
4. Discuss Items. Any emergency procedure and partial panel.
5. Block MIF

CTS REF	MANEUVER	C6101
1	General Knowledge/Procedures	4
2	Emergency Procedures	4
3	Headwork/Situational Awareness	4
4	Basic Air Work	4
N	No Start/Zero Oil Pressure	4
N	Hung Start	4
N	Hot Start	4
N	Engine Fire During Start	4
N	Engine Fire After Start	4
N	Chip Light While Taxiing	4
N	Rollback During Takeoff/Abort	4
N	Engine Fire During Takeoff/Abort	4
N	Engine Fire In Flight/HAPL	4
N	Engine Fire In Flight/LAPL	4
N	Fuel Quantity Imbalance	4
N	Fuel Quantity Failure	4
N	Propeller Primary Governor Failure	4
N	Rollback/PEL/Flameout/Airstart/PEL	4
N	Flameout/Airstart/PEL	4
N	Uncontrollable High Power/PEL/HAPL	4
N	Chip Light/Low Oil Pressure/Propeller Feathers	4

MIF continued on next page.

CTS REF	MANEUVER	C6101
N	Engine-Driven Fuel Boost Pump Failure	4
N	Primary High Pressure Fuel Pump Failure	4
N	Compressor Stall/Engine Seizure	4
N	Inverter Failure/Torque Gauge Failure	4
N	Inverter Failure/Partial Panel PAR	4
N	Generator Failure/Battery Failure	4
N	Unsafe Gear Up	4
N	Unsafe Gear Down	4
N	Bailout	4
N	Ditching	4
N	Partial Panel	4+

Chapter IV

Contact Training

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

2. Contact Stage MIF

 Check Ride Event

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C5005	C5103	C5202	C5390	C5401	C5590	C5601	C5790
1	General Knowledge/ Procedures	4+	4+	4+	4+	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+	4+	4+	4+	4+	4+
4	Basic Air Work	4+	4+	4+	4+	4+	4+	4+	4+
5	Mission Planning	4+	4+	4+	4+	4+	4+	4+	4+
6	In-Flight Planning/ Area Orientation	4+							
7	In-Flight Checks	4+							
8	Radio Procedures					4+	4+		
9	Ground Procedures	4+				4+	4+		
9	Ground Procedures Introduction				4+				
41	Checklist Omissions			4+					
10	Normal Takeoff	4+				4+	4+		
10	Normal Takeoff Introduction	4+			4+	4+	4+		
42	Improper Control Inputs			4+					
13	Turn Pattern	4+							
12	LSC	4+							
14	SFMCM	4+							

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C5005	C5103	C5202	C5390	C5401	C5590	C5601	C5790
15	POS	4+							
16	ATS	4+						4+	4+
17	Spin	4+							
52	STS	4+							
50	Control Release Spin			4+				4+	4+
51	Progressive Spin			4+				4+	4+
53	Cross-Control Departure/Recovery			4+				4+	4+
53	Aggravated ATS Departure/Recovery			4+				4+	4+
43	Improper ELP			4+				4+	4+
44	Improper Slip			4+					
20	PPEL	4+				4+	4+		
18	HAPL	4+							
19	LAPL	4+							
26	PPEL/P	4+							
27	LAPL/P	4+							
21	OLF Operations	4+							
22	Landing Pattern	4+							
23	FFL	4+	4+			4+	4+		
24	NFL	4+	4+			4+	4+		
25	Go Around/Waveoff	4+							
28	Course Rules/HFE	4+				4+	4+		
54	Inverted Flight		4+		4+				
32	Aileron Roll		4+						
33	Loop		4+						
34	Wingover		4+						
35	Barrel Roll		4+						
36	One-Half Cuban Eight		4+						
37	Split-S		4+						

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C5005	C5103	C5202	C5390	C5401	C5590	C5601	C5790
38	Immelmann		4+						
39	Combination Maneuver		4+						
40	AOA Approach		4+						
54	Inverted Flight Introduction		4+						
32	Aileron Roll Introduction		4+		4				
33	Loop Introduction		4+		4				
34	Wingover Introduction		4+		4				
35	Barrel Roll Introduction		4+		4				
36	One-Half Cuban Eight Introduction		4+		4				
37	Split-S Introduction		4+		4				
38	Immelmann Introduction		4+		4				
53	OCF Recovery				4				
39	Combination Maneuver Introduction		4+						
40	AOA Approach Introduction		4+		4+				
52	STS Introduction				4+				
12	LSC Introduction	4+							
14	SFMC Introduction	4+							
15	POS Introduction	4+							
16	ATS Introduction	4+			4+				
17	Spin Introduction	4+			4+				
18	HAPL Introduction	4+			4+				
19	LAPL Introduction	4+			4+				
27	LAPL/P Introduction	4+			4+				
20	PPEL Introduction	4+			4+	4+	4+		
26	PPEL/P Introduction	4+			4+				

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	C5005	C5103	C5202	C5390	C5401	C5590	C5601	C5790
21	OLF Operations Introduction	4+							
23	FFL Introduction	4+	4+		4+	4+	4+		
24	NFL Introduction	4+	4+		4+	4+	4+		
25	Go Around/Waveoff Introduction	4+			4+				
29	Unusual Attitudes (Nose-High)		4+		4				
30	Unusual Attitudes (Nose-Low)		4+		4				
31	Unusual Attitudes (Inverted)		4+		4				
28	Course Rules/HFE Introduction	4+				4+	4+		
45	EPL Use (At Altitude) Introduction	4+							
46	Intentional Feather While Airborne Introduction	4+							
53	Improper Spin Entry/Recovery			4+					
48	Course Rules/HFE Deviations			4+					
49	Communication Errors			4+					
56	High-Speed Spiral							4+	4+
47	Landing Pattern Errors			4+				4+	4+
	Special Syllabus Requirements	1	1	1				1	1

Block	Media	Title	Events	Hrs	H/X
C50	T-34	Day Contact (R/C)	5	11.0	2.2

1. Prerequisites

- a. C0106 (Day Contact Flight Procedures Lecture).
- b. C7190.

2. Syllabus Notes

a. Once C5004 is complete, C5005 event may be flown at any time prior to C5390.

b. C5003-5: A portion of each flight should emphasize demonstration of common student errors by the SI.

3. Special Syllabus Requirements

C5001

Ground procedures introduction, taxiing introduction, HAPL introduction, LAPL introduction, LAPL/P introduction, PPEL introduction, PPEL/P introduction, spin introduction, ATS introduction, STS introduction, FFA/FFL introduction, and NFA/NFL introduction.

C5002

GPU start introduction.

4. Discuss Items

C5001

Instrument, gas, and position reports (IGP); and electrical/unknown origin fire (VMC).

C5002

Landing pattern chalkboard brief, crosswind approach and landing, unsafe landing errors, engine fire in flight, and GPU start.

C5003

Emergency landing pattern chalkboard brief, emergency field selection, unsafe landing gear, fuel leaks or siphoning, common SMA errors, and management of a typical SMA flight profile.

C5004

IUT briefs conduct of flight and ditching.

C5005

IUT briefs conduct of flight, waveoff procedures (to include local operations), unintentional instrument flight, and abnormal starts.

5. Block MIF

CTS REF	MANEUVER	C5005
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/Area Orientation	4+
7	In-Flight Checks	4+
9	Ground Procedures	4+
10	Normal Takeoff	4+
10	Normal Takeoff Introduction	4+
13	Turn Pattern	4+
12	LSC	4+
14	SFMCM	4+
15	POS	4+
16	ATS	4+
17	Spin	4+
52	STS	4+
20	PPEL	4+
18	HAPL	4+
19	LAPL	4+
26	PPEL/P	4+
27	LAPL/P	4+
21	OLF Operations	4+
22	Landing Pattern	4+
23	FFL	4+
24	NFL	4+
25	Go Around/Waveoff	4+
28	Course Rules/HFE	4+
12	LSC Introduction	4+
14	SFMCM Introduction	4+
15	POS Introduction	4+
16	ATS Introduction	4+
17	Spin Introduction	4+

MIF continued on next page.

CTS REF	MANEUVER	C5005
18	HAPL Introduction	4+
19	LAPL Introduction	4+
27	LAPL/P Introduction	4+
20	PPEL Introduction	4+
26	PPEL/P Introduction	4+
21	OLF Operations Introduction	4+
23	FFL Introduction	4+
24	NFL Introduction	4+
25	Go Around/Waveoff Introduction	4+
28	Course Rules/HFE Introduction	4+
45	EPL Use (At Altitude) Introduction	4+
46	Intentional Feather While Airborne Introduction	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
C51	T-34	Day Contact (R/C)	3	6.0	2.0

1. Prerequisites

- a. C5004, IUT only.
- b. C0101-2 and C0107-10 (Contact Ground Training), Rotary-to-Strike Transition only.
- c. C7004, Rotary-to-Strike Transition only.

2. Syllabus Notes

C5102-3

A portion of each flight should emphasize demonstration of common student errors by the SI.

3. Special Syllabus Requirements

C5101

Aerobatics safety precautions introduction, wingover introduction, loop introduction, aileron roll introduction, barrel roll introduction, half-Cuban eight introduction, split-s introduction, Immelmann introduction, combination maneuver introduction, AOA approach introduction, and inverted flight introduction.

4. Discuss Items

C5101

Aerobatics, AOA approach technique and precautions, and abnormal ITT on shutdown.

C5102

Day Contact grading criteria, safe-for-solo criteria, compressor stalls, and common SMA errors.

C5103

Inverted spin recovery, OCF/UA recovery, and energy management.

5. Block MIF

CTS REF	MANEUVER	C5103
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
23	FFL	4+
24	NFL	4+
54	Inverted Flight	4+
32	Aileron Roll	4+
33	Loop	4+
34	Wingover	4+
35	Barrel Roll	4+
36	One-Half Cuban Eight	4+
37	Split-S	4+
38	Immelmann	4+
39	Combination Maneuver	4+
40	AOA Approach	4+
54	Inverted Flight Introduction	4+
32	Aileron Roll Introduction	4+
33	Loop Introduction	4+
34	Wingover Introduction	4+
35	Barrel Roll Introduction	4+
36	One-Half Cuban Eight Introduction	4+
37	Split-S Introduction	4+
38	Immelmann Introduction	4+
39	Combination Maneuver Introduction	4+
40	AOA Approach Introduction	4+
23	FFL Introduction	4+
24	NFL Introduction	4+
29	Unusual Attitudes (Nose-High)	4+
30	Unusual Attitudes (Nose-Low)	4+
31	Unusual Attitudes (Inverted)	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
C52	T-34	Day Contact (R/C)	2	3.8	1.9

1. Prerequisites

- a. C0401 (OCF exam).
- b. C5103.

2. Syllabus Note. The SI will brief the flight with the IUT and discuss out-of-control flight recognition and recovery techniques. Emphasis will be placed on interpretation of cockpit indications to include spin versus spiral characteristics. In flight, the SI will perform controlled flight departures to allow the IUT to practice out-of-control flight recoveries. A review of the high-spin indications and aggravated recovery techniques will be conducted.

3. Special Syllabus Requirement

C5201
High-speed spiral demonstration.

4. Discuss Items

C5201
Out-of-control flight recognition and recovery; defensive positioning/exposure/recovery; spin versus spiral flight characteristics; MPTS review of ATF, ATS, and safe-for-solo cards; common student errors: spin and stall errors; defensive positioning for all maneuvers listed in the MIF; and what to expect on C5202 flight profile (i.e., simulated C4104).

C5202
Early contact defensive positioning, Contact stage student errors, how to brief a typical student Contact flight (ATF, ATS, etc.), managing a typical student Contact flight (i.e., high to low), how to write the ATF and grade using MPTS, and course training standards and how to use them.

5. Block MIF

CTS REF	MANEUVER	C5202
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
41	Checklist Omissions	4+
42	Improper Control Inputs	4+
50	Control Release Spin	4+
51	Progressive Spin	4+
53	Cross-Control Departure/Recovery	4+
53	Aggravated ATS Departure/Recovery	4+
43	Improper ELP	4+
44	Improper Slip	4+
53	Improper Spin Entry/Recovery	4+
48	Course Rules/HFE Deviations	4+
49	Communication Errors	4+
47	Landing Pattern Errors	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
C53	T-34	Standardization Day Contact Check Ride (R/C)	1	2.3	2.3

1. Prerequisites

- a. C0301 (Day Contact Flight Procedures Exam).
- b. C0202 (Safe-for-Solo Exam).
- c. C5005.
- d. C5202.

2. Syllabus Notes

a. OCF maneuvers are required on initial qualification only. They may be flown on requalification flights if flown with an OCF instructor.

b. A minimum of four aerobatic maneuvers (SI choice) shall be flown.

3. Special Syllabus Requirements. None.

4. Discuss Items

C5390

Any emergency procedure, slip demonstration, LSC, SFMCM, POS, defensive positioning, OCF, and OCF recovery procedures.

5. Block MIF

CTS REF	MANEUVER	C5390
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
9	Ground Procedures Introduction	4+
10	Normal Takeoff Introduction	4+
54	Inverted Flight	4+
32	Aileron Roll Introduction	4
33	Loop Introduction	4
34	Wingover Introduction	4
35	Barrel Roll Introduction	4
36	One-Half Cuban Eight Introduction	4
37	Split-S Introduction	4
38	Immelmann Introduction	4
53	OCF Recovery	4
40	AOA Approach Introduction	4+
52	STS Introduction	4+
16	ATS Introduction	4+
17	Spin Introduction	4+
18	HAPL Introduction	4+
19	LAPL Introduction	4+
27	LAPL/P Introduction	4+
20	PPEL Introduction	4+
26	PPEL/P Introduction	4+
23	FFL Introduction	4+
24	NFL Introduction	4+
25	Go Around/Waveoff Introduction	4+
29	Unusual Attitudes (Nose-High)	4
30	Unusual Attitudes (Nose-Low)	4
31	Unusual Attitudes (Inverted)	4

Block	Media	Title	Events	Hrs	H/X
C54	T-34	Night Contact (R/C)	1	1.8	1.8

1. Prerequisite. C0111 (Night Contact Flight Procedures (CAI)).
2. Syllabus Note. None.
3. Special Syllabus Requirements. None.
4. Discuss Items

C5401

Applicable night emergencies, aircraft and cockpit lighting, local night SOP, generator failure, and electrical system malfunctions.

5. Block MIF

CTS REF	MANEUVER	C5401
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
8	Radio Procedures	4+
9	Ground Procedures	4+
10	Normal Takeoff	4+
10	Normal Takeoff Introduction	4+
20	PPEL	4+
23	FFL	4+
24	NFL	4+
28	Course Rules/HFE	4+
20	PPEL Introduction	4+
23	FFL Introduction	4+
24	NFL Introduction	4+
28	Course Rules/HFE Introduction	4+

Block	Media	Title	Events	Hrs	H/X
C55	T-34	Standardization Night Contact Check Ride (R/C)	1	1.6	1.6

1. Prerequisites

- a. C0302 (Night Contact Flight Procedures Exam).
- b. C5401.
- c. N5102.

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items

C5590

Applicable night emergencies, and local SOP night operations.

5. Block MIF

CTS REF	MANEUVER	C5590
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
8	Radio Procedures	4+
9	Ground Procedures	4+
10	Normal Takeoff	4+
10	Normal Takeoff Introduction	4+
20	PPEL	4+
23	FFL	4+
24	NFL	4+
28	Course Rules/HFE	4+
20	PPEL Introduction	4+
23	FFL Introduction	4+
24	NFL Introduction	4+
28	Course Rules/HFE Introduction	4+

Block	Media	Title	Events	Hrs	H/X
C56	T-34C	Standardization Out-of-Control Flight (F/C)	1	2.0	2.0

1. Prerequisite. Completion of IUT syllabus.
2. Syllabus Notes. OCF Upgrade.
3. Special Syllabus Requirements. Control release spin, progressive spin, high-speed spiral, cross-control departure/recovery, aggravated approach turn stall (flight idle), improper emergency landing pattern profile, landing errors, and any common error listed in Common Error section of the FTI.
4. Discuss Items

C5601

Out-of-control flight/recovery procedures, high spins (control release, progressive), spin versus spiral, common IUT errors, and defensive positioning.

5. Block MIF

CTS REF	MANEUVER	C5601
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
16	ATS	4+
50	Control Release Spin	4+
51	Progressive Spin	4+
53	Cross-Control Departure/Recovery	4+
53	Aggravated ATS Departure/Recovery	4+
43	Improper ELP	4+
56	High-Speed Spiral	4+
47	Landing Pattern Errors	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
C57	T-34C	Standardization Out-of-Control Flight Check Ride (F/C)	1	2.0	2.0

1. Prerequisite. C5601.
2. Syllabus Notes. OCF Upgrade.
3. Special Syllabus Requirements. Control release spin, progressive spin, high-speed spiral, cross-control departure/recovery, aggravated approach turn stall, improper emergency landing pattern profile, landing errors, and any common error listed in Common Error section of the FTI.
4. Discuss Items

C5790

Out-of-control flight/recovery procedures, high spins (control release, progressive), spin versus spiral, common IUT errors, and defensive positioning.

5. Block MIF

CTS REF	MANEUVER	C5790
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
16	ATS	4+
50	Control Release Spin	4+
51	Progressive Spin	4+
53	Cross-Control Departure/Recovery	4+
53	Aggravated ATS Departure/Recovery	4+
43	Improper ELP	4+
56	High-Speed Spiral	4+
47	Landing Pattern Errors	4+
	Special Syllabus Requirements	1

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Chapter V

Instrument Training

1. Matrices. The following matrix is an overview of the entire Instrument stage, except the NATOPS Instrument Check, I5590. 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.

2. Instrument Stage MIF

Simulator/Device Event
 Check Ride Event

INSTRUMENT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	I4002	I5002	I4102	I5103	I5203	I4201	I5302	I5490
1	General Knowledge/ Procedures	4+	4+	4+	4+	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+	4+	4+	4+	4+	4+
4	Basic Air Work	4+	4+	4+	4+	4+	4+	4+	4+
5	Mission Planning		4+		4+	4+		4+	
7	In-Flight Checks	4+	4+	4+	4+	4+	4+	4+	4+
93	In-Flight Computations					4+			
8	Radio Procedures			4+	4+				4+
8	Radio Procedures Introduction					4+			
9	Ground Procedures		4+						
11	Departure	4+	4+	4+			4+	4+	
11	Departure Introduction				4+	4+			4+
76	Enroute Procedures			4+			4+		
76	Enroute Procedures Introduction				4+			4+	4+
82	Station Passage			4+					
81	Over the Station Intercept			4+					
80	Radial Intercepts			4+					

MIF continued on next page.

INSTRUMENT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	I4002	I5002	I4102	I5103	I5203	I4201	I5302	I5490
80	Radial Intercepts Introduction				4+				
79	Shuttle Descent			4+					
81	OSI Introduction				4+				
85	Teardrop Approach			4+					
86	Procedure Turn Approach			4+					
87	Holding Pattern Approach			4+					
79	Terminal Descent			4+					
64	ICA	4+							
64	ICA Introduction		4+						
60	CABT	4+							
60	CABT Introduction		4+						4
61	Constant Airspeed Climbs	4+							
61	Constant Airspeed Climbs Introduction		4+						4
62	Constant Rate Turns	4+							
62	Constant Rate Turns Introduction		4+						4
63	Constant Rate Climbs and Descents	4+							
63	Constant Rate Climbs and Descents Introduction		4+						4
79	Enroute Climbs and Descents Introduction				4+				4+
79	Climbs and Descents Introduction					4+			
65	S-1 Pattern	4+							
65	S-1 Pattern Introduction		4+						4
66	Direct to a VOR/TACAN	4+							
66	Direct to a VOR/TACAN Introduction		4+						4

MIF continued on next page.

INSTRUMENT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	I4002	I5002	I4102	I5103	I5203	I4201	I5302	I5490
67	Penetration Maneuver	4+							
67	Penetration Maneuver Introduction		4+						4
68	BAC Maneuver	4+							
68	BAC Maneuver Introduction		4+						4
69	GCA Maneuver	4+							
69	GCA Maneuver Introduction		4+						4
70	Approach Maneuver	4+							
70	Approach Maneuver Introduction		4+						4
96	Localizer Approach Introduction					4+			
89	Straight-In Approach Introduction					4+			
94	Intersection Holding Introduction					4+			4
83	VOR Holding Introduction				4+				4
79	Shuttle Descent Introduction				4+				4+
85	Teardrop Approach Introduction				4+	4			4
86	Procedure Turn Approach Introduction				4+	4			4
87	Holding Pattern Approach Introduction				4+	4			4
92	Missed Approach Introduction				4+				4+
91	RVFAC Introduction				4+	4+			4+
99	No-Gyro GCA Introduction (PAR)				4+				4
97	ASR Approach Introduction				4+				
98	PAR Approach Introduction				4+				4

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INSTRUMENT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	I4002	I5002	I4102	I5103	I5203	I4201	I5302	I5490
77	PTP Introduction				3+	4+			4+
77	PTP			4+					
84	TACAN Holding			4+					
84	TACAN Holding Introduction					4+			
78	Arcing			4+					
78	Arcing Introduction				3+	4+			4
88	Arcing Approach			4+					
88	Arcing Approach Introduction				3+	4+			4
90	Circling Approach/Maneuver Introduction					4+			4
95	High Altitude Approach			4+					
95	High Altitude Approach Introduction					4			
83	VOR Holding			4+		4			
83	VOR Holding (Under the Hood)				4				
85	Teardrop Approach (Under the Hood)				4				
86	Procedure Turn Approach (Under the Hood)				4				
87	Holding Pattern Approach (Under the Hood)				4				
71	Unusual Attitude (IMC) Introduction		4+						
72	Partial Panel (S&L)	4+							
72	Partial Panel (S&L) Introduction		4+						
73	Partial Panel (Timed Turns)	4+							
73	Partial Panel (Timed Turns) Introduction		4+						

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INSTRUMENT STAGE MANEUVER ITEM FILE									
CTS REF	MANEUVER	I4002	I5002	I4102	I5103	I5203	I4201	I5302	I5490
74	Partial Panel (Enroute Descents)	4+							
74	Partial Panel (Enroute Descents) Introduction		4+						
75	Partial Panel (Unusual Attitudes)	4+							
75	Partial Panel (Unusual Attitudes) Introduction		4+						
55	Vertigo Demonstration		4+						
91	RVFAC	4+	4+						
100	GPS Holding						3+		
100	GPS Holding Introduction							4+	
101	GPS Procedure Turn Approach						3+	4	
102	GPS Arcing Approach							4	
103	GPS RVFAC						3+		
103	GPS RVFAC Introduction							4+	4
92	Missed Approach			4+					
104	GPS Missed Approach						3+		
104	GPS Missed Approach Introduction							4+	
	Special Syllabus Requirements		1		1	1			

Block	Media	Title	Events	Hrs	H/X
I40	IFT	Basic Instruments	2	2.6	1.3

1. Prerequisites

- a. I0104 (Basic Instrument Flight Procedures (CAI)).
- b. C7190.

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4001

Instrument checklist, scan patterns, and unintentional instrument flight.

I4002

Electrical fire IMC, inverter failure, generator failure, and partial panel.

5. Block MIF

CTS REF	MANEUVER	I4002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
7	In-Flight Checks	4+
11	Departure	4+
64	ICA	4+
60	CABT	4+
61	Constant Airspeed Climbs	4+
62	Constant Rate Turns	4+
63	Constant Rate Climbs and Descents	4+
65	S-1 Pattern	4+
66	Direct to a VOR/TACAN	4+
67	Penetration Maneuver	4+
68	BAC Maneuver	4+
69	GCA Maneuver	4+
70	Approach Maneuver	4+
72	Partial Panel (S&L)	4+
73	Partial Panel (Timed Turns)	4+
74	Partial Panel (Enroute Descents)	4+
75	Partial Panel (Unusual Attitudes)	4+
91	RVFAC	4+

Block	Media	Title	Events	Hrs	H/X
I50	T-34	Basic Instruments (F/C)	2	4.0	2.0

1. Prerequisites

- a. I4002, IUT only.
- b. C7004 prior to I5002, Rotary-to-Strike Transition only.
- c. I0104 prior to I5002, Rotary-to-Strike Transition only.

2. Syllabus Note. IUT shall occupy the rear cockpit for the first event in block to facilitate partial panel maneuvers.

3. Special Syllabus Requirements

I5001

Local departure, penetration, BAC maneuver, and vertigo demonstration.

4. Discuss Items

I5001

Instrument, gas, and oxygen (IGO) reports; instrument checklist; instrument scan; local IFR departure; and local airspace management/MOA operations.

I5002

Hypoxia/hyperventilation and bleed air warning light.

5. Block MIF

CTS REF	MANEUVER	I5002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
7	In-Flight Checks	4+
9	Ground Procedures	4+
11	Departure	4+
64	ICA Introduction	4+
60	CABT Introduction	4+
61	Constant Airspeed Climbs Introduction	4+
62	Constant Rate Turns Introduction	4+
63	Constant Rate Climbs and Descents Introduction	4+
65	S-1 Pattern Introduction	4+
66	Direct to a VOR/TACAN Introduction	4+
67	Penetration Maneuver Introduction	4+
68	BAC Maneuver Introduction	4+
69	GCA Maneuver Introduction	4+
70	Approach Maneuver Introduction	4+
71	Unusual Attitude (IMC) Introduction	4+
72	Partial Panel (S&L) Introduction	4+
73	Partial Panel (Timed Turns) Introduction	4+
74	Partial Panel (Enroute Descents) Introduction	4+
75	Partial Panel (Unusual Attitudes) Introduction	4+
55	Vertigo Demonstration	4+
91	RVFAC	4+
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
I41	IFT	Radio Instruments (F/C)	2	2.6	1.3

1. Prerequisites. I0302-7 (Radio Instrument Flight Procedures, Part 1 and 2).

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4101

Instrument/Equipment (I/E) checkout and clearance and departure procedures.

I4102

Lost communications local procedures/FIH.

5. Block MIF

CTS REF	MANEUVER	I4102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
11	Departure	4+
76	Enroute Procedures	4+
82	Station Passage	4+
81	Over the Station Intercept	4+
80	Radial Intercepts	4+
79	Shuttle Descent	4+
85	Teardrop Approach	4+
86	Procedure Turn Approach	4+
87	Holding Pattern Approach	4+
79	Terminal Descent	4+
77	PTP	4+
84	TACAN Holding	4+
78	Arcing	4+
88	Arcing Approach	4+
95	High Altitude Approach	4+
83	VOR Holding	4+
92	Missed Approach	4+

Block	Media	Title	Events	Hrs	H/X
I51	T-34	Radio Instruments (F/C)	3	6.0	2.0

1. Prerequisites

- a. I4102, IUT only.
- b. I5002, Rotary-to-Strike Transition only.

2. Syllabus Notes

a. IUT shall occupy the rear cockpit on the first event in block in order to facilitate VOR holding and one VOR approach hooded.

b. At least two flights from block I51 or I52 must be completed during an out-and-in or during a cross-country.

c. During demo portion of flight, SI does the talking.

d. For Rotary-to-Strike IUTs, I5101 will be flown at higher approach speeds.

e. DD 175s are required for all events in the block.

f. I5102-3: A portion of each flight should emphasize demonstration of common student errors by the SI.

3. Special Syllabus Requirements

I5101

I/E introduction, clearance introduction, holding/shuttle introduction, VOR approach introduction, missed approach introduction, and GPS operation.

I5102

Intersection introduction, enroute climb/descent introduction, RVFAC introduction, and PAR approach introduction.

I5103

Arcing introduction, point-to-point (PTP) introduction, arcing approach introduction, and ASR approach introduction.

4. Discuss Items

I5101

Applicable student flight profile, fuel checks, fuel system malfunctions, IFR nature emergency procedures, working areas, RI abbreviations, and GPS operations. The IUT will fly and do the talking for a portion of the flight.

I5102

Applicable student flight profile, PAR approach, and bleed air valve malfunction. The IUT will fly and do the talking for a portion of the flight.

I5103

Applicable student flight profile, no-gyro GCA approach (PAR), ASR approach, local GCA pattern, and flight planning. The IUT will fly and do the talking for a portion of the flight.

5. Block MIF

CTS REF	MANEUVER	I5103
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
11	Departure Introduction	4+
76	Enroute Procedures Introduction	4+
80	Radial Intercepts Introduction	4+
81	OSI Introduction	4+
79	Enroute Climbs and Descents Introduction	4+
83	VOR Holding Introduction	4+
79	Shuttle Descent Introduction	4+
85	Teardrop Approach Introduction	4+
86	Procedure Turn Approach Introduction	4+
87	Holding Pattern Approach Introduction	4+
92	Missed Approach Introduction	4+
91	RVFAC Introduction	4+
99	No-Gyro GCA Introduction (PAR)	4+
97	ASR Approach Introduction	4+
98	PAR Approach Introduction	4+
77	PTP Introduction	3+
78	Arcing Introduction	3+

MIF continued on next page.

CTS REF	MANEUVER	I5103
88	Arcing Approach Introduction	3+
83	VOR Holding (Under the Hood)	4
85	Teardrop Approach (Under the Hood)	4
86	Procedure Turn Approach (Under the Hood)	4
87	Holding Pattern Approach (Under the Hood)	4
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
I52	T-34	Radio Instruments (F/C)	3	6.6	2.2

1. Prerequisite. I5103.

2. Syllabus Notes

a. During this block, the SI may assume student roles (flying and/or student communications to include avionics command) as warranted to augment instructional training environment.

b. During demonstration portion of flight, SI does the talking.

c. DD 175s are required for all events in the block.

3. Special Syllabus Requirements

I5201

Radar environment should be used for portion of flight. Localizer approach introduction, straight-in approach introduction, and intersection-holding introduction.

4. Discuss Items

I5201

Student flight profile, TACAN holding, radar environment communications, intersection holding, stereo routes (canned flight plans), and localizer approach. The IUT will fly and do the talking for a portion of the flight.

I5202

Applicable student flight profile, and smoke and fume elimination. The IUT shall be prepared to fly and do all the talking.

I5203

Applicable student flight profile. The IUT shall be prepared to fly and do all the talking.

5. Block MIF

CTS REF	MANEUVER	I5203
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
7	In-Flight Checks	4+
93	In-Flight Computations	4+
8	Radio Procedures Introduction	4+
11	Departure Introduction	4+
79	Climbs and Descents Introduction	4+
96	Localizer Approach Introduction	4+
89	Straight-In Approach Introduction	4+
94	Intersection Holding Introduction	4+
85	Teardrop Approach Introduction	4
86	Procedure Turn Approach Introduction	4
87	Holding Pattern Approach Introduction	4
91	RVFAC Introduction	4+
77	PTP Introduction	4+
84	TACAN Holding Introduction	4+
78	Arcing Introduction	4+
88	Arcing Approach Introduction	4+
90	Circling Approach/Maneuver Introduction	4+
95	High Altitude Approach Introduction	4
83	VOR Holding	4
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
I42	IFT	Radio Instruments (F/C)	1	1.3	1.3

1. Prerequisites. I0308-10 (Radio Instrument Flight Procedures II).

2. Syllabus Notes

a. IUT will load flight plan in the ground runup.

b. Initial RVFAC GPS approach will terminate in a missed approach followed by direct to an alternate for a second RVFAC GPS approach.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4201

Requirements to execute the approach, GPS DME versus TACAN DME, scale of CDI during the approach, and stepdown altitudes.

5. Block MIF

CTS REF	MANEUVER	I4201
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
7	In-Flight Checks	4+
11	Departure	4+
76	Enroute Procedures	4+
100	GPS Holding	3+
101	GPS Procedure Turn Approach	3+
103	GPS RVFAC	3+
104	GPS Missed Approach	3+

Block	Media	Title	Events	Hrs	H/X
I53	T-34C	Radio Instruments (F/C)	2	4.0	2.0

1. Prerequisite. I4201.

2. Syllabus Notes

a. Flights are conducted to enable the IUT to accomplish GPS enroute navigation and terminal area procedures in all weather conditions.

b. IUT will load flight plan on the ground.

c. A minimum of three approaches and holding shall be accomplished on each event. One approach will terminate to a missed approach followed by direct to an alternate for a follow-on approach.

d. Flight can be conducted in VMC or IMC conditions.

e. DD 175s are required for all events in the block.

3. Special Syllabus Requirements

I5301

Direct to a waypoint not in the flight plan (named and lat/long). Programming a radial and distance from a VOR.

4. Discuss Items

I5301

RAIM, OBS/LEG mode, NAV/GPS mode, arcing, departure procedures, enroute navigation, STARs, any EP, and applicable student profile.

I5302

Alternate requirements, mandatory approach requirements, any EP, and applicable student profile.

5. Block MIF

CTS REF	MANEUVER	I5302
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
7	In-Flight Checks	4+
11	Departure	4+
76	Enroute Procedures Introduction	4+
100	GPS Holding Introduction	4+
101	GPS Procedure Turn Approach	4
102	GPS Arcing Approach	4
103	GPS RVFAC Introduction	4+
104	GPS Missed Approach Introduction	4+

Block	Media	Title	Events	Hrs	H/X
I54	T-34C	Standardization Instrument Check Ride (F/C)	1	2.5	2.5

1. Prerequisites

- a. I0311 (Instrument Stage Flight Procedures Exam).
- b. I5002, I5203, and I5302.

2. Syllabus Note. Complete three instrument approaches, one of which should be a precision approach; complete a point-to-point, any holding, and two basic instrument maneuvers (SI choice).

3. Special Syllabus Requirements. None.

4. Discuss Items:

I5490

Student check ride criteria, GPS operations, lost communication (IAW local SOP), and basic instrument procedures/MOA operations.

5. Block MIF

CTS REF	MANEUVER	I5490
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
11	Departure Introduction	4+
76	Enroute Procedures Introduction	4+
60	CABT Introduction	4
61	Constant Airspeed Climbs Introduction	4
62	Constant Rate Turns Introduction	4

MIF continued on next page.

CTS REF	MANEUVER	I5490
63	Constant Rate Climbs and Descents Introduction	4
79	Enroute Climbs and Descents Introduction	4+
65	S-1 Pattern Introduction	4
66	Direct to a VOR/TACAN Introduction	4
67	Penetration Maneuver Introduction	4
68	BAC Maneuver Introduction	4
69	GCA Maneuver Introduction	4
70	Approach Maneuver Introduction	4
94	Intersection Holding Introduction	4
83	VOR Holding Introduction	4
79	Shuttle Descent Introduction	4+
85	Teardrop Approach Introduction	4
86	Procedure Turn Approach Introduction	4
87	Holding Pattern Approach Introduction	4
92	Missed Approach Introduction	4+
91	RVFAC Introduction	4+
99	No-Gyro GCA Introduction (PAR)	4
98	PAR Approach Introduction	4
77	PTP Introduction	4+
78	Arcing Introduction	4
88	Arcing Approach Introduction	4
90	Circling Approach/Maneuver Introduction	4
103	GPS RVFAC Introduction	4

Block	Media	Title	Events	Hrs	H/X
I55	T-34C	NATOPS Instrument Check Ride	1	2.0	2.0

1. Prerequisites

- a. G1013 (NATOPS Instrument Ground School/IRATS Exam).
- b. G1011 (CRM).

2. Syllabus Notes

a. Nonplused graded items are not required when evaluation is conducted under actual instrument conditions.

b. If annual CRM flight evaluation was conducted in conjunction with the NATOPS Instrument Check Ride, it shall be noted in the remarks section of the OPNAV 3710/2 NATOPS Instrument Rating Request Form.

3. Special Syllabus Requirements. None.

4. Discuss Items. None.

5. Block MIF

CTS REF	MANEUVER	I5590
N	Instrument Takeoff	4
N	Climbing/Descending Timed Turns	4
N	Steep Turns	4
N	Recovery From Unusual Attitudes	4
N	VOR/TACAN Positioning	4+
N	Partial Panel Air Work	4
N	Flight Planning	4+
N	Clearance Compliance	4+
N	Instrument Approaches	4+
N	Communications and Navigation Equipment	4+
N	Emergency Procedures	4+
N	Voice Procedures	4+

Chapter VI

Navigation Training

1. 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.

2. Navigation Stage MIF

NAVIGATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	N5002	N5102
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	4+	4+
8	Radio Procedures	4+	4+
9	Ground Procedures Introduction	4+	4+
76	Enroute Procedures Introduction	4+	4+
10	Normal Takeoff	4+	4+
57	VFR Course Maintenance	4+	4+
58	VFR Arrival	4+	4+
59	VFR Pattern	4+	4+
24	NFL	4	4+
23	FFL	4	4+

Block	Media	Title	Events	Hrs	H/X
N50	T-34C	Day Navigation (R/C)	2	3.0	1.5

1. Prerequisite. N0109 (Navigation Flight Procedures Exam).
2. Syllabus Note. N50 Block may be flown at anytime during the Day Contact syllabus.
3. Special Syllabus Requirements. None.
4. Discuss Items

N5001

VFR chart preparation, emergency field selection, destination maintenance facilities and operating procedures, airspace classification, and VFR field entry/departure (not break).

N5002

Local cross-country SOP.

5. Block MIF

CTS REF	MANEUVER	N5002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
8	Radio Procedures	4+
9	Ground Procedures Introduction	4+
76	Enroute Procedures Introduction	4+
10	Normal Takeoff	4+
57	VFR Course Maintenance	4+
58	VFR Arrival	4+
59	VFR Pattern	4+
24	NFL	4
23	FFL	4

Block	Media	Title	Events	Hrs	H/X
N51	T-34C	Night Navigation (R/C)	2	3.0	1.5

1. Prerequisite. N5001.
2. Syllabus Notes. N51 Block may be flown anytime after N5001, but must be complete prior to C5590.
3. Special Syllabus Requirements. None.
4. Discuss Items

N5101

Night visual navigation procedures, night VFR chart interpretation, and local night VNAV SOPs.

N5102

Any applicable night emergency.

5. Block MIF

CTS REF	MANEUVER	N5102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
5	Mission Planning	4+
8	Radio Procedures	4+
9	Ground Procedures Introduction	4+
76	Enroute Procedures Introduction	4+
10	Normal Takeoff	4+
57	VFR Course Maintenance	4+
58	VFR Arrival	4+
59	VFR Pattern	4+
24	NFL	4+
23	FFL	4+

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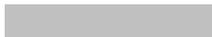
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Chapter VII

Formation Training

1. Matrices. The following matrices are overviews of the entire Formation Stage. The purpose of these matrices 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.

2. Formation Stage MIF

 Check Ride Event

FORMATION STAGE MANEUVER ITEM FILE						
CTS REF	MANEUVER	F5002	F5103	F5290	F5302	F5490
1	General Knowledge/Procedures	4+	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+	4+	4+
4	Basic Air Work	4+	4+	4+	4+	4+
9	Ground Procedures	4+			4	4
9	Ground Procedures Introduction		4+	4+	4	4
8	Radio Procedures	4+			4	4
8	Radio Procedures Introduction		4+	4+	4	4
114	Visual Signals	4+			4+	
114	Visual Signals Introduction		4+	4+	4+	4+
6	In-Flight Planning/Area Orientation	4+			4+	
6	In-Flight Planning/Area Orientation Introduction		4+	4+	4+	4+
7	In-Flight Checks	4+			4+	
7	In-Flight Checks Introduction		4+	4+	4+	4+
	FORMATION LEAD					
118	Interval Takeoff/Running Rendezvous	4+				
118	Interval Takeoff/Running Rendezvous Introduction		4+	4+	4	

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE						
CTS REF	MANEUVER	F5002	F5103	F5290	F5302	F5490
105	Section Takeoff				4+	
105	Section Takeoff Introduction				4+	4+
106	Dash 2 Consideration	4+			4	
106	Dash 2 Consideration Introduction		4+	4+	4+	4+
115	Breakup and Rendezvous	4+				
115	Breakup and Rendezvous Introduction		4+	4+	4	4
108	Lead Change	4+			4	
108	Lead Change Introduction		4+	4+	4	4
109	Cruise	4+			4	
109	Cruise Introduction		4+	4+	4	4
110	Cruise Maneuvering				4+	
110	Cruise Maneuvering Introduction				4+	4+
108	Cruise Lead Change	4+			4	
108	Cruise Lead Change Introduction		4+	4+	4	4
111	Tail-Chase				4	
111	Tail-Chase Introduction				4	4
112	Knock-It-Off Procedures				4+	4+
113	Section Approach		4+	4	4+	
113	Section Approach Introduction				4+	4+
28	Course Rules/HFE	4+			4	
28	Course Rules/HFE Introduction		4+	4+	4	4
	FORMATION WING					
118	Interval Takeoff/Running Rendezvous	4+				
118	Interval Takeoff/Running Rendezvous Introduction		4+	4	4	4
105	Section Takeoff				4+	
105	Section Takeoff Introduction				4+	4+
125	Parade	4+				

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE						
CTS REF	MANEUVER	F5002	F5103	F5290	F5302	F5490
125	Parade Introduction		4+	4+	4	4
120	VFR Turns Into	4+				
120	VFR Turns Into Introduction		4+	4+	4	4
121	VFR Turns Away	4+				
121	VFR Turns Away Introduction		4+	4+	4	4
123	Crossunder	4+				
123	Crossunder Introduction		4+	4+	4	4
122	45-Degree AOB Turns	4+				
122	45-Degree AOB Turns Introduction		4+	4+	4	4
107	IFR Parade Turns				4+	
107	IFR Parade Turns Introduction				4+	4+
115	Breakup and Rendezvous	4+				
115	Breakup and Rendezvous Introduction		4+	4+	4	4
124	Underrun	4+				
124	Underrun Introduction		4+	4+	4	4
108	Lead Change	4+				
108	Lead Change Introduction		4+	4+	4	4
109	Cruise	4+				
109	Cruise Introduction		4+	4+	4	4
110	Cruise Maneuvering				4+	
110	Cruise Maneuvering Introduction				4+	4+
108	Cruise Lead Change	4+				
108	Cruise Lead Change Introduction		4+	4+	4	4
111	Tail-Chase				4	
111	Tail-Chase Introduction				4	4
112	Knock-It-Off Procedures				4+	4+
113	Section Approach		4+	4		
113	Section Approach Introduction				4+	4+

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE						
CTS REF	MANEUVER	F5002	F5103	F5290	F5302	F5490
	MISCELLANEOUS					
137	Visual Landing Gear Check		4+			
24	NFL	4	4	4	4	4
23	FFL	4	4	4	4	4
	Special Syllabus Requirements	1			1	

3. AF Formation Stage MIF

 Check Ride Event

AF FORMATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	F5505	F5690
1	General Knowledge/Procedures	4+	4+
2	Emergency Procedures	4+	4+
3	Headwork/Situational Awareness	4+	4+
4	Basic Air Work	4+	4+
9	Ground Procedures Introduction	4+	4+
8	Radio Procedures Introduction	4+	4+
114	Visual Signals Introduction	4+	4+
6	In-Flight Planning/Area Orientation Introduction	4+	4+
7	In-Flight Checks Introduction	4+	4+
5	Mission Planning	4+	3+
	FORMATION LEAD		
106	Dash 2 Consideration Introduction	4+	4+
108	Lead Change Introduction	4+	4+
112	Knock-It-Off Procedures	4	4
118	Interval Takeoff Introduction	4+	4
105	Formation Takeoff Introduction	4+	4
11	Departure Introduction	4+	4+
135	G-Awareness Exercise Introduction	4+	4
130	Turning Rejoin Introduction	4+	4+
117	Wingwork Introduction	4+	4+
116	Extended Trail Introduction	4+	4+
113	Formation Approach Introduction	4+	4
119	Formation Landing Introduction	4+	4

MIF continued on next page.

AF FORMATION STAGE MANEUVER ITEM FILE			
CTS REF	MANEUVER	F5505	F5690
	FORMATION WING		
123	Crossunder Introduction	4+	4+
108	Lead Change Introduction	4+	4+
112	Knock-It-Off Procedures	4	4
118	Interval Takeoff Introduction	4+	4
105	Formation Takeoff Introduction	4+	4
125	Fingertip Introduction	4+	4+
128	Route Introduction	4+	4+
135	G-Awareness Exercise Introduction	4+	4
126	Echelon Introduction	4+	4+
129	Straight Ahead Rejoin Introduction	4+	4+
130	Turning Rejoin Introduction	4+	4+
132	High Yo-Yo Introduction	4+	4+
133	Low Yo-Yo Introduction	4+	4+
117	Wingwork Introduction	4+	4+
116	Extended Trail Introduction	4+	4+
131	Breakout Introduction	4+	4+
113	Formation Approach Introduction	4+	4
119	Formation Landing Introduction	4+	4
	MISCELLANEOUS		
127	Lost Wingman Introduction	4+	4+
136	AF Closed Pattern Introduction	4+	4+
134	Tactical Spread Introduction	4+	4+
134	Tactical Turns Introduction	4+	4+
24	NFL	4	4
23	FFL	4	4
	Special Syllabus Requirements	1	

Block	Media	Title	Events	Hrs	H/X
F50	T-34C	Basic Formation (F/C)	2	4.0	2.0

1. Prerequisites

- a. F0101 (Basic Formation Flight Procedures).
- b. Completion of IUT syllabus, Basic Formation Upgrade only.
- c. C5103, Rotary-to-Strike Transition only.

2. Syllabus Notes. None.

3. Special Syllabus Requirements

F5001

Interval takeoff/running rendezvous introduction, underrun introduction, visual signals introduction, parade introduction, error correction introduction, parade turns introduction, crossunder introduction, breakup and rendezvous introduction (includes underrun), lead change introduction, lead introduction, cruise introduction, cruise lead change introduction, and course rules/HFE introduction.

4. Discuss Items

F5001

Emergency field locations in operating area, visual signals, IFR parade, area management, course rules, and formation FWOP.

F5002

Aborted takeoff procedures for lead and wingman, and responsibilities of the section leader.

5. Block MIF

CTS REF	MANEUVER	F5002
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures	4+
8	Radio Procedures	4+
114	Visual Signals	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
	FORMATION LEAD	
118	Interval Takeoff/Running Rendezvous	4+
106	Dash 2 Consideration	4+
115	Breakup and Rendezvous	4+
108	Lead Change	4+
109	Cruise	4+
108	Cruise Lead Change	4+
28	Course Rules/HFE	4+
	FORMATION WING	
118	Interval Takeoff/Running Rendezvous	4+
125	Parade	4+
120	VFR Turns Into	4+
121	VFR Turns Away	4+
123	Crossunder	4+
122	45-Degree AOB Turns	4+
115	Breakup and Rendezvous	4+
124	Underrun	4+
108	Lead Change	4+
109	Cruise	4+
108	Cruise Lead Change	4+
	MISCELLANEOUS	
24	NFL	4
23	FFL	4
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
F51	T-34C	Basic Formation (R/C)	3	6.0	2.0

1. Prerequisite. F5002.
2. Syllabus Note. Basic Formation Upgrade.
3. Special Syllabus Requirement
F5101
Visual landing gear check.
4. Discuss Items
F5101
HEFOE procedures, lost communication procedures, unintentional instrument flight, lost sight procedures, and section approach.
F5102
Section HAPL/LAPL/PEL procedures, blind procedures, cruise signals, cruise turns, and cruise lead change.
F5103
Airborne damaged aircraft and visual landing gear inspection.
5. Block MIF

CTS REF	MANEUVER	F5103
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures Introduction	4+
8	Radio Procedures Introduction	4+
114	Visual Signals Introduction	4+
6	In-Flight Planning/Area Orientation Introduction	4+
7	In-Flight Checks Introduction	4+

MIF continued on next page.

CTS REF	MANEUVER	F5103
	FORMATION LEAD	
118	Interval Takeoff/Running Rendezvous Introduction	4+
106	Dash 2 Consideration Introduction	4+
115	Breakup and Rendezvous Introduction	4+
108	Lead Change Introduction	4+
109	Cruise Introduction	4+
108	Cruise Lead Change Introduction	4+
113	Section Approach	4+
28	Course Rules/HFE Introduction	4+
	FORMATION WING	
118	Interval Takeoff/Running Rendezvous Introduction	4+
125	Parade Introduction	4+
120	VFR Turns Into Introduction	4+
121	VFR Turns Away Introduction	4+
123	Crossunder Introduction	4+
122	45-Degree AOB Turns Introduction	4+
115	Breakup and Rendezvous Introduction	4+
124	Underrun Introduction	4+
108	Lead Change Introduction	4+
109	Cruise Introduction	4+
108	Cruise Lead Change Introduction	4+
113	Section Approach	4+
	MISCELLANEOUS	
137	Visual Landing Gear Check	4+
24	NFL	4
23	FFL	4

Block	Media	Title	Events	Hrs	H/X
F52	T-34C	Standardization Basic Formation Check Ride (R/C)	1	2.0	2.0

1. Prerequisites

- a. F0103 (Basic Formation Exam).
- b. F5103.

2. Syllabus Notes. Basic Formation Upgrade.

3. Special Syllabus Requirements. None.

4. Discuss Items

F5290

Any previously discussed maneuver and any emergency procedure.

5. Block MIF

CTS REF	MANEUVER	F5290
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures Introduction	4+
8	Radio Procedures Introduction	4+
114	Visual Signals Introduction	4+
6	In-Flight Planning/Area Orientation Introduction	4+
7	In-Flight Checks Introduction	4+
	FORMATION LEAD	
118	Interval Takeoff/Running Rendezvous Introduction	4+
106	Dash 2 Consideration Introduction	4+
115	Breakup and Rendezvous Introduction	4+
108	Lead Change Introduction	4+
109	Cruise Introduction	4+
108	Cruise Lead Change Introduction	4+

MIF continued on next page.

CTS REF	MANEUVER	F5290
113	Section Approach	4
28	Course Rules/HFE Introduction	4+
	FORMATION WING	
118	Interval Takeoff/Running Rendezvous Introduction	4
125	Parade Introduction	4+
120	VFR Turns Into Introduction	4+
121	VFR Turns Away Introduction	4+
123	Crossunder Introduction	4+
122	45-Degree AOB Turns Introduction	4+
115	Breakup and Rendezvous Introduction	4+
124	Underrun Introduction	4+
108	Lead Change Introduction	4+
109	Cruise Introduction	4+
108	Cruise Lead Change Introduction	4+
113	Section Approach	4
	MISCELLANEOUS	
24	NFL	4
23	FFL	4

Block	Media	Title	Events	Hrs	H/X
F53	T-34C	Cruise Formation (R/C)	2	4.0	2.0

1. Prerequisites

a. F0201 (Cruise Formation Flight Procedures), Cruise Formation Upgrade only.

b. F5290, Cruise Formation Upgrade only.

c. F5002, Rotary-to-Strike Transition only.

2. Syllabus Notes

a. The IUT shall occupy the rear cockpit on all flights.

b. F5302 shall stress common student errors.

3. Special Syllabus Requirements

F5301

Knock-it-off as Lead and Wing.

F5302

Common student errors.

4. Discuss Items

F5301

Local airspace and course rules, section takeoff and approach, cruise maneuvering, and knock-it-off procedures.

F5302

Takeoff and landing emergencies, energy management, and common student errors.

5. Block MIF

CTS REF	MANEUVER	F5302
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures	4
9	Ground Procedures Introduction	4
8	Radio Procedures	4
8	Radio Procedures Introduction	4
114	Visual Signals	4+
114	Visual Signals Introduction	4+
6	In-Flight Planning/Area Orientation	4+
6	In-Flight Planning/Area Orientation Introduction	4+
7	In-Flight Checks	4+
7	In-Flight Checks Introduction	4+
	FORMATION LEAD	
118	Interval Takeoff/Running Rendezvous Introduction	4
105	Section Takeoff	4+
105	Section Takeoff Introduction	4+
106	Dash 2 Consideration	4
106	Dash 2 Consideration Introduction	4+
115	Breakup and Rendezvous Introduction	4
108	Lead Change	4
108	Lead Change Introduction	4
109	Cruise	4
109	Cruise Introduction	4
110	Cruise Maneuvering	4+
110	Cruise Maneuvering Introduction	4+
108	Cruise Lead Change	4
108	Cruise Lead Change Introduction	4
111	Tail-Chase	4
111	Tail-Chase Introduction	4

MIF continued on next page.

CTS REF	MANEUVER	F5302
112	Knock-It-Off Procedures	4+
113	Section Approach	4+
113	Section Approach Introduction	4+
28	Course Rules/HFE	4
28	Course Rules/HFE Introduction	4
	FORMATION WING	
118	Interval Takeoff/Running Rendezvous Introduction	4
105	Section Takeoff	4+
105	Section Takeoff Introduction	4+
125	Parade Introduction	4
120	VFR Turns Into Introduction	4
121	VFR Turns Away Introduction	4
123	Crossunder Introduction	4
122	45-Degree AOB Turns Introduction	4
107	IFR Parade Turns	4+
107	IFR Parade Turns Introduction	4+
115	Breakup and Rendezvous Introduction	4
124	Underrun Introduction	4
108	Lead Change Introduction	4
109	Cruise Introduction	4
110	Cruise Maneuvering	4+
110	Cruise Maneuvering Introduction	4+
108	Cruise Lead Change Introduction	4
111	Tail-Chase	4
111	Tail-Chase Introduction	4
112	Knock-It-Off Procedures	4+
113	Section Approach Introduction	4+
	MISCELLANEOUS	
24	NFL	4
23	FFL	4
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
F54	T-34C	Standardization Cruise Formation Check Ride (R/C)	1	2.0	2.0

1. Prerequisites

- a. F0202 (Cruise Formation Flight Procedures Exam).
- b. F5302.

2. Syllabus Notes. Cruise Formation Upgrade; the IUT must perform knock-it-off procedures as both Lead and Wing during the event.

3. Special Syllabus Requirements. None.

4. Discuss Items

F5490

Any previously discussed maneuver and any emergency procedure.

5. Block MIF

CTS REF	MANEUVER	F5490
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures	4
9	Ground Procedures Introduction	4
8	Radio Procedures	4
8	Radio Procedures Introduction	4
114	Visual Signals Introduction	4+
6	In-Flight Planning/Area Orientation Introduction	4+
7	In-Flight Checks Introduction	4+
	FORMATION LEAD	
105	Section Takeoff Introduction	4+
106	Dash 2 Consideration Introduction	4+
115	Breakup and Rendezvous Introduction	4
108	Lead Change Introduction	4

MIF continued on next page.

CTS REF	MANEUVER	F5490
109	Cruise Introduction	4
110	Cruise Maneuvering Introduction	4+
108	Cruise Lead Change Introduction	4
111	Tail-Chase Introduction	4
112	Knock-It-Off Procedures	4+
113	Section Approach Introduction	4+
28	Course Rules/HFE Introduction	4
	FORMATION WING	
118	Interval Takeoff/Running Rendezvous Introduction	4
105	Section Takeoff Introduction	4+
125	Parade Introduction	4
120	VFR Turns Into Introduction	4
121	VFR Turns Away Introduction	4
123	Crossunder Introduction	4
122	45-Degree AOB Turns Introduction	4
107	IFR Parade Turns Introduction	4+
115	Breakup and Rendezvous Introduction	4
124	Underrun Introduction	4
108	Lead Change Introduction	4
109	Cruise Introduction	4
110	Cruise Maneuvering Introduction	4+
108	Cruise Lead Change Introduction	4
111	Tail-Chase Introduction	4
112	Knock-It-Off Procedures	4+
113	Section Approach Introduction	4+
	MISCELLANEOUS	
24	NFL	4
23	FFL	4

AF Formation Syllabus

1. Syllabus Management. The AF Formation Syllabus is written to prepare USAF Fighter/Bomber track students for the fighter/bomber Specialized Undergraduate Pilot Training Program at Vance AFB. AF Formation in the T-34C is conducted in a way that is very specific to AF fighter/bomber operations and therefore contains basic AF formations, AF formation procedures, and three-dimensional maneuvering. The IUT syllabus for AF Formation is designed to bring an IUT from a non-AF, non-fixed wing background to a proficiency level that is satisfactory to instruct this syllabus at the Joint Primary Training Squadron at NAS Whiting Field.

Block	Media	Title	Events	Hrs	H/X
F55	T-34C	AF Formation (R/C)	5	10.0	2.0

1. Prerequisites

- a. F0301 (AF Formation Flight Procedures).
- b. F5490.

2. Syllabus Note. AF Formation Upgrade; IUT will occupy the front cockpit on the first flight of Block 55.

3. Special Syllabus Requirements

F5501

AF briefing procedures, formation takeoff, route formation, MOA procedures, fence check/OPS check, G-awareness procedures, wingwork, echelon turn, lost wingman, breakout, extended trail maneuvering, and formation approach and landing - home field.

F5502

AF pattern ops.

4. Discuss Items:

F5501

AF brief procedures, AF formation flow, and formation landing.

F5502

AGSM analysis and MOA entry/exit procedures.

F5503

Formation takeoff emergencies and restricted area entry/exit procedures.

F5504

Formation approach and landing emergencies and out-and-in procedures.

F5505

Extended trail maneuvering brief.

5. Block MIF

CTS REF	MANEUVER	F5505
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures Introduction	4+
8	Radio Procedures Introduction	4+
114	Visual Signals Introduction	4+
6	In-Flight Planning/Area Orientation Introduction	4+
7	In-Flight Checks Introduction	4+
5	Mission Planning	4+
	FORMATION LEAD	
106	Dash 2 Consideration Introduction	4+
108	Lead Change Introduction	4+
112	Knock-It-Off Procedures	4
118	Interval Takeoff Introduction	4+
105	Formation Takeoff Introduction	4+
11	Departure Introduction	4+
135	G-Awareness Exercise Introduction	4+
130	Turning Rejoin Introduction	4+
117	Wingwork Introduction	4+
116	Extended Trail Introduction	4+
113	Formation Approach Introduction	4+
119	Formation Landing Introduction	4+

MIF continued on next page.

CTS REF	MANEUVER	F5505
	FORMATION WING	
123	Crossunder Introduction	4+
108	Lead Change Introduction	4+
112	Knock-It-Off Procedures	4
118	Interval Takeoff Introduction	4+
105	Formation Takeoff Introduction	4+
125	Fingertip Introduction	4+
128	Route Introduction	4+
135	G-Awareness Exercise Introduction	4+
126	Echelon Introduction	4+
129	Straight Ahead Rejoin Introduction	4+
130	Turning Rejoin Introduction	4+
132	High Yo-Yo Introduction	4+
133	Low Yo-Yo Introduction	4+
117	Wingwork Introduction	4+
116	Extended Trail Introduction	4+
131	Breakout Introduction	4+
113	Formation Approach Introduction	4+
119	Formation Landing Introduction	4+
	MISCELLANEOUS	
127	Lost Wingman Introduction	4+
136	AF Closed Pattern Introduction	4+
134	Tactical Spread Introduction	4+
134	Tactical Turns Introduction	4+
24	NFL	4
23	FFL	4
	Special Syllabus Requirements	1

Block	Media	Title	Events	Hrs	H/X
F56	T-34C	Standardization AF Formation Check Ride (R/C)	1	2.0	2.0

1. Prerequisites

- a. F0302 (AF Formation Exam).
- b. F5505.

2. Syllabus Notes. AF Formation Upgrade.

3. Special Syllabus Requirements. None.

4. Discuss Items

F5690
AF formation brief.

5. Block MIF

CTS REF	MANEUVER	F5690
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
9	Ground Procedures Introduction	4+
8	Radio Procedures Introduction	4+
114	Visual Signals Introduction	4+
6	In-Flight Planning/Area Orientation Introduction	4+
7	In-Flight Checks Introduction	4+
5	Mission Planning	3+
	FORMATION LEAD	
106	Dash 2 Consideration Introduction	4+
108	Lead Change Introduction	4+
112	Knock-It-Off Procedures	4
118	Interval Takeoff Introduction	4
105	Formation Takeoff Introduction	4
11	Departure Introduction	4+

MIF continued on next page.

CTS REF	MANEUVER	F5690
135	G-Awareness Exercise Introduction	4
130	Turning Rejoin Introduction	4+
117	Wingwork Introduction	4+
116	Extended Trail Introduction	4+
113	Formation Approach Introduction	4
119	Formation Landing Introduction	4
	FORMATION WING	
123	Crossunder Introduction	4+
108	Lead Change Introduction	4+
112	Knock-It-Off Procedures	4
118	Interval Takeoff Introduction	4
105	Formation Takeoff Introduction	4
125	Fingertip Introduction	4+
128	Route Introduction	4+
135	G-Awareness Exercise Introduction	4
126	Echelon Introduction	4+
129	Straight Ahead Rejoin Introduction	4+
130	Turning Rejoin Introduction	4+
132	High Yo-Yo Introduction	4+
133	Low Yo-Yo Introduction	4+
117	Wingwork Introduction	4+
116	Extended Trail Introduction	4+
131	Breakout Introduction	4+
113	Formation Approach Introduction	4
119	Formation Landing Introduction	4
	MISCELLANEOUS	
127	Lost Wingman Introduction	4+
136	AF Closed Pattern Introduction	4+
134	Tactical Spread Introduction	4+
134	Tactical Turns Introduction	4+
24	NFL	4
23	FFL	4

Chapter VIII

Tactical Training

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

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Chapter IX

Course Training Standards (CTS)

1. Purpose. These standards outline the tasks and proficiency required of IUTs during the initial and upgrade training.
2. IUT Duties and Responsibilities
 - a. Plan the mission.
 - b. Ensure the aircraft is preflighted, inspected, and equipped for the assigned mission.
 - c. Operate the aircraft to accomplish the mission using sound judgment and airmanship.
3. General Standards
 - a. Achieve training standards for VMC maneuvers in conjunction with visual clearing.
 - b. Unless otherwise specified, use **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 Maneuver Item File (MIF) regulates IUT 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	STANDARD
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 IUT..."

6. Graded Items. The MIF for specific graded items varies for each stage. Several items are graded on all complete syllabus events. The standards for these Universally Graded Items are listed first. Then beginning with NATOPS, each stage's MIF table is listed followed by the Course Training Standards unique to that stage. Once the standard for a graded item has been established, it will be omitted from later stages where it is also graded.

7. Course Training Standards

UNIVERSALLY GRADED ITEMS

BEHAVIOR STATEMENT	STANDARD
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.
3. Headwork/Situational Awareness	
<ul style="list-style-type: none"> • Comply with the FTI and NATOPS while maintaining situational awareness sufficient for flight safety. 	<ul style="list-style-type: none"> • Understands instructions, demonstrations, and explanations. • Foresees and avoids possible difficulties. • Remains alert and spatially oriented.

BEHAVIOR STATEMENT	STANDARDS
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 FLIPs. ● Maintains appropriate boundaries and altitude block within a working area as required.
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. ● Does not go below Joker or Bingo Fuel without informing the flight leader as applicable.

BEHAVIOR STATEMENT	STANDARDS
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.

CONTACT

BEHAVIOR STATEMENT	STANDARDS
9. Ground Procedures	
<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.
10. 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.
11. 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.
12. Level Speed Change	
<ul style="list-style-type: none"> ● Perform a level speed change per the FTI. 	<ul style="list-style-type: none"> ● Maintains BAW.

BEHAVIOR STATEMENT	STANDARDS
13. 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.
14. Slow Flight/Minimum Control Maneuver	
<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.
15. Power Off Stall	
<ul style="list-style-type: none"> ● Perform a POS 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 above 1000 feet of entry altitude.
16. Approach Turn Stall	
<ul style="list-style-type: none"> ● Perform an ATS 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.

BEHAVIOR STATEMENT	STANDARDS
17. 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.
18. High Altitude Power Loss	
<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.
19. Low Altitude Power Loss	
<ul style="list-style-type: none"> ● Intercept the ELP following a simulated engine failure between 800 feet 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.
20. Practice Precautionary Emergency Landing	
<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.

BEHAVIOR STATEMENT	STANDARDS
21. 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.
22. Landing Pattern	
<ul style="list-style-type: none"> ● If from initial: <ul style="list-style-type: none"> ▶ From rolling out on downwind to the straightaway. ● If from takeoff, touch-and-go, or waveoff: <ul style="list-style-type: none"> ▶ Commencing the crosswind turn to the straightaway. 	<ul style="list-style-type: none"> ● Complies with BAW parameters except: <ul style="list-style-type: none"> ▶ Maximum 30° AOB. ▶ Full Flap: <ul style="list-style-type: none"> ▪ 85-100 KIAS from 180 until straightaway. ▪ 80-95 KIAS until beginning FULL FLAP LANDING. ▶ No-Flap: <ul style="list-style-type: none"> ▪ 90-105 KIAS from 180 until beginning NO-FLAP LANDING. ▶ 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.
23. Full Flap Landing (FFL)	
<ul style="list-style-type: none"> ● Execute normal landing per the FTI. ● From crossing runway threshold 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
24. No-Flap Landing	
<ul style="list-style-type: none"> ● Execute NFL per the FTI. ● From crossing runway threshold until: <ul style="list-style-type: none"> ▶ Touch-and-go, commencing crosswind turn. ▶ Full stop, aircraft 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). ▶ Aircraft ±10 feet of centerline. ● Touches down in the touchdown zone as defined by Contact FTI and local instructions.
25. Go Around/Waveoff	
<ul style="list-style-type: none"> ● Discontinue approach to landing. 	<ul style="list-style-type: none"> ● Expeditionously 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.
26. PPEL/P	
<ul style="list-style-type: none"> ● Procedures comply with the FTI. ● IP initiated at/above 500 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.

BEHAVIOR STATEMENT	STANDARDS
27. 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.
28. Course Rules/Home Field Entry	
<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.
29. Unusual Attitude (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.
30. Unusual Attitude (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.
31. Unusual Attitude (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. ▶ Enter subsequent unusual attitude. ▶ Split-S.

BEHAVIOR STATEMENT	STANDARDS
32. 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.
33. 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.
34. 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° 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.
35. 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 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.
36. 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
37. 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.
38. 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.
39. 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.
40. Angle of Attack 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.
41. Checklist Omissions	
<ul style="list-style-type: none"> ● Recognize common student errors per the FTI concerning checklist omissions. ● Display proper defensive positioning to prevent unsafe checklist errors during ground operations and flight. 	<ul style="list-style-type: none"> ● Recognizes checklist omissions when simulated by IP and corrects error in a timely manner. ● Displays proper defensive positioning and intervenes at appropriate times to prevent unsafe common student errors associated with checklist omissions.

BEHAVIOR STATEMENT	STANDARDS
42. Improper Control Inputs	
<ul style="list-style-type: none"> ● Recognize common student errors per the FTI concerning improper control inputs during Contact flight maneuvers. ● Display proper defensive positioning to prevent unsafe improper control inputs during ground operations and flight. 	<ul style="list-style-type: none"> ● Recognizes improper control inputs when simulated by IP and corrects error in a timely manner. ● Displays proper defensive positioning and intervenes at appropriate times to prevent unsafe common student errors associated with improper control inputs.
43. Improper ELP	
<ul style="list-style-type: none"> ● Recognize common student errors per the FTI concerning the emergency landing pattern. ● Display proper defensive positioning to prevent unsafe situations during the ELP. 	<ul style="list-style-type: none"> ● Recognizes deviations from the standard ELP when simulated by IP and corrects error in a timely manner. ● Displays proper defensive positioning and intervenes at appropriate times to prevent unsafe situations throughout the ELP.
44. Improper Slip	
<ul style="list-style-type: none"> ● Recognize common student errors per the FTI when slipping the aircraft. ● Display proper defensive positioning to prevent unsafe situations during a slip. 	<ul style="list-style-type: none"> ● Recognizes common student errors associated with the slip when simulated by IP, and corrects error in a timely manner. ● Displays proper defensive positioning and intervenes at appropriate times to prevent unsafe situations while slipping the aircraft.

BEHAVIOR STATEMENT	STANDARDS
45. EPL Use (At Altitude) Introduction	
<ul style="list-style-type: none"> ● Perform EPL use at altitude per the FTI and local SOP. 	<ul style="list-style-type: none"> ● Commences maneuver with condition lever in full increase. ● Operates EPL smoothly. ● Retards PCL to idle after EPL is set to desired power setting. ● Monitors power settings during changes in altitude. ● Maintains sufficient altitude per FTI and local SOP. ● Completes maneuver with PCL set to desired power setting and EPL in disconnect.
46. Intentional Feather While Airborne Introduction	
<ul style="list-style-type: none"> ● Perform intentional feather while airborne per the FTI. 	<ul style="list-style-type: none"> ● Commences maneuver over hard surface runway with sufficient altitude to complete procedures above 5000 feet AGL. ● Maintains safe airspeed (between 90 and 110 knots) throughout maneuver. ● Sufficiently discusses and demonstrates similarities between PCL at 205 ft-lbs and condition lever feather at 100-knot glide. ● Notes time it takes for propeller to return to governing range after being feathered. ● Completes maneuver with condition lever full increase and the propeller in normal governing range.
47. Landing Pattern Errors	
<ul style="list-style-type: none"> ● Recognize common student errors per the FTI during landing pattern training. ● Display proper defensive positioning to prevent unsafe situations while in the landing pattern. 	<ul style="list-style-type: none"> ● Recognizes landing pattern errors when simulated by IP and corrects error in a timely manner. ● Displays proper defensive positioning and intervenes at appropriate times to prevent unsafe situations while in the landing pattern.

BEHAVIOR STATEMENT	STANDARDS
48. Course Rules/HFE Deviations	
<ul style="list-style-type: none"> ● Recognize common student errors associated with flying course rules. ● Display proper defensive positioning to prevent unsafe traffic conflicts and/or flight violations while flying course rules. 	<ul style="list-style-type: none"> ● Recognizes course rules/HFE deviations when simulated by IP and corrects error in a timely manner. ● Displays proper defensive positioning and intervenes at appropriate times to prevent potentially unsafe traffic conflicts and/or flight violations associated with flying course rules.
49. Communication Errors	
<ul style="list-style-type: none"> ● Maintain a thorough working knowledge of all standardized radio calls per the FWOP/course rules. 	<ul style="list-style-type: none"> ● Recognizes communication errors when simulated by IP and corrects errors in a timely manner. ● Displays a working knowledge of all standardized radio calls throughout ground and flight operations.

OCF

BEHAVIOR STATEMENT	STANDARDS
50. Control Release Spin	
<ul style="list-style-type: none"> ● Perform control release spin IAW NATOPS. 	<ul style="list-style-type: none"> ● Selects altitude that allows recovery by 5000 feet. ● Ensures aircraft is in a steady state spin before releasing the controls. ● Recovery procedures are IAW NATOPS.
51. Progressive Spin	
<ul style="list-style-type: none"> ● Perform progressive spin IAW NATOPS. 	<ul style="list-style-type: none"> ● Selects altitude that allows recovery by 5000 feet. ● Ensures aircraft is in steady state spin before reversing the rudder direction. ● Recovery procedures are IAW NATOPS.

BEHAVIOR STATEMENT	STANDARDS
52. Skidded Turn Stall	
<ul style="list-style-type: none"> ● Perform skidded turn stall IAW NATOPS or FTI. 	<ul style="list-style-type: none"> ● Selects altitude that allows recovery by 5000 feet. ● Ensures 150 knots is not exceeded. ● Correctly and promptly recovers from OCF IAW NATOPS.
53. Out-of-Control Flight Recovery	
<ul style="list-style-type: none"> ● Recognize OCF situation and promptly execute recovery procedures. 	<ul style="list-style-type: none"> ● Executes OCF recovery procedures IAW NATOPS. ● Does not overspeed gear and/or flaps. ● Does not overstress the aircraft. ● Recovers by 5000 feet.
54. Inverted Flight	
<ul style="list-style-type: none"> ● Establish the aircraft at recommended entry airspeed of 150-170 knots in the clean configuration. 	<ul style="list-style-type: none"> ● Performs inverted flight IAW FTI. ● Does not exceed 15 seconds inverted. ● Maintains altitude ± 500 feet. ● Maintains heading $\pm 15^\circ$.
55. Vertigo Demonstration	
<ul style="list-style-type: none"> ● Perform vertigo demonstration. 	<ul style="list-style-type: none"> ● Performs a series of shallow turns, climbs, and descents in order to induce vertigo in the SMA. ● Demonstrates proper vertigo recovery.
56. High-Speed Spiral	
<ul style="list-style-type: none"> ● Perform spiral maneuver and recover per OCF FTI. 	<ul style="list-style-type: none"> ● Maintains thorough working knowledge of spiral indications and characteristics. ● Commences in clean configuration. ● Performs clearing turn and stall checklist. ● Enters spiral at or above 9000 feet AGL. ● Performs entry IAW OCF FTI. ● Reports AOA, airspeed, and turn needle following spiral entry. ● Initiates proper recovery inputs at 120 to 130 knots not to exceed 150 knots. ● Recovers from dive without exceeding 4.5 G or 24 AOA.

NAVIGATION

BEHAVIOR STATEMENT	STANDARDS
57. 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.
58. 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.
59. 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.

INSTRUMENTS

BEHAVIOR STATEMENT	STANDARDS
60. 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.
61. 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.
62. 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
63. Constant Rate Climbs and Descents	
<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.
64. Initial Climb to Altitude	
<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.
65. 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.
66. 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.
67. Penetration Maneuver	
<ul style="list-style-type: none"> • Perform the penetration maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
68. BAC Maneuver	
<ul style="list-style-type: none"> • Perform the BAC maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
69. GCA Maneuver	
<ul style="list-style-type: none"> • Perform the GCA maneuver per the FTI. 	<ul style="list-style-type: none"> • Maintains BAW parameters.
70. 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
71. 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.
72. 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. ▶ ±20° heading. ▶ ≤ standard-rate turn.
73. 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. ▶ ±20° heading. ▶ ≤ standard-rate turn.
74. 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. ▶ ±20° heading. ▶ ≤ standard-rate turn. ▶ Rate of descent ±100 FPM.
75. 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.

BEHAVIOR STATEMENT	STANDARDS
76. 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. ● Estimates 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.
77. Point-to-Point	
<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.
78. 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 $\pm 3^\circ$.
79. 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.
80. 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.
81. Over the Station Intercepts	
<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.

BEHAVIOR STATEMENT	STANDARDS
82. 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.
83. 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.
84. 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.
85. Teardrop 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.
86. Procedure Turn 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
87. Holding Pattern 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.
88. 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.
89. 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
90. 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.
91. Radar Vectors to Final Approach Course	
<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 $\pm 5^\circ$.
92. 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.
93. In-Flight Computations	
<ul style="list-style-type: none"> ● Periodically compute: <ul style="list-style-type: none"> ▶ Ground speed. ▶ ETE/ETA. ▶ Fuel at destination. 	<ul style="list-style-type: none"> ● Computes: <ul style="list-style-type: none"> ▶ Ground speed ± 5 knots. ▶ ETE/ETA consistent with ground speed. ▶ Fuel consistent with ground speed.

BEHAVIOR STATEMENT	STANDARDS
94. 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.
95. 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.
96. 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.
97. Airport Surveillance Radar 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 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 MAP.
98. Precision Approach Radar Approach	
<ul style="list-style-type: none"> ● Perform final approach from descent point to MAP 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 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 MAP.

BEHAVIOR STATEMENT	STANDARDS
99. No-Gyro Ground-Controlled Approach	
<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 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.
100. 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.
101. GPS Procedure Turn Approach	
<ul style="list-style-type: none"> ● Perform a GPS procedure turn approach as per FTI. 	<ul style="list-style-type: none"> ● Initial approach waypoint to FAWP: <ul style="list-style-type: none"> ▶ Utilizes OBS or LEG mode correctly. ▶ Maintains course ± 0.25 NM or valid intercept. ● At 3 NM from FAWP, ensures FAWP is active waypoint. ● At 2 NM from FAWP, ensures GPS is in active mode. ● 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.

BEHAVIOR STATEMENT	STANDARDS
102. GPS Arcing Approach	
<ul style="list-style-type: none"> ● Perform a GPS arcing approach as per FTI. 	<ul style="list-style-type: none"> ● Initial approach waypoint to FAWP: <ul style="list-style-type: none"> ▶ Utilizes OBS or LEG mode correctly. ▶ Maintains course on arc ± 0.25 NM. ● 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 ft.
103. 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.

BEHAVIOR STATEMENT	STANDARDS
104. 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.

FORMATION

BEHAVIOR STATEMENT	STANDARDS
105. 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. ● Wingman maintains takeoff position until gear retraction, and then expeditiously moves to parade/fingertip position.
106. Dash 2 Consideration	
<ul style="list-style-type: none"> ● Plan and maneuver to avoid unnecessarily complicating Dash 2's tasks. 	<ul style="list-style-type: none"> ● Considers airspace and weather in planning maneuvers. ● Monitors Dash 2. ● Does not exceed Dash 2 capabilities. ● Maneuvers smoothly and avoids abrupt power changes. ● Does not exceed FTI parameters.
107. IFR Parade Turns	
<ul style="list-style-type: none"> ● Perform parade turns during simulated IMC. 	<ul style="list-style-type: none"> ● Maintains normal parade checkpoints for all turns. ● Lead does not exceed 45° AOB.
108. Lead Change	
<ul style="list-style-type: none"> ● Transfer control of the flight from lead to Dash 2. 	<ul style="list-style-type: none"> ● Performs expeditiously IAW the appropriate FTI parameters and procedures.

BEHAVIOR STATEMENT	STANDARDS
109. Cruise	
<ul style="list-style-type: none"> ● Maintain enroute formation position IAW FTI. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Does not exceed 45° AOB. ▶ 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.
110. 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.
111. 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 Dash 2. ● Wing: <ul style="list-style-type: none"> ▶ Recognizes changes in aspect, bearing line, closure, and range. ▶ Correctly establishes lead/lag/pure pursuit to maintain 6-800 feet nose-to-tail position. ▶ Minimizes use of power to maintain position.

BEHAVIOR STATEMENT	STANDARDS
112. Knock-It-Off Procedures	
<ul style="list-style-type: none"> ● Perform knock-it-off for any unsafe or other required situation. 	<ul style="list-style-type: none"> ● Maneuvers in appropriate, predictable manner to not present further hazard to the flight. ● Executes proper communications.
113. 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 Dash 2 consideration. ● Wing: <ul style="list-style-type: none"> ▶ Maintains parade/fingertip parameters.
114. Visual Signals	
<ul style="list-style-type: none"> ● Communicate using hand, head, and aircraft movements. 	<ul style="list-style-type: none"> ● Performs IAW FTI.
115. 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 Dash 2's position.
116. 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 wingman. ● 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.
117. Wingwork	
<ul style="list-style-type: none"> ● Stay in close formation. 	<ul style="list-style-type: none"> ● Lead: <ul style="list-style-type: none"> ▶ Maneuvers smoothly. ▶ Maintains FTI parameters. ▶ Monitors wingmen. ● Dash 2 maintains parade/fingertip parameters.

BEHAVIOR STATEMENT	STANDARDS
118. Interval Takeoff/Running Rendezvous	
<ul style="list-style-type: none"> ● Perform takeoff as Dash 2 from takeoff clearance until in parade/fingertip position. 	<ul style="list-style-type: none"> ● Performs IAW FTI. ● Dash 2 accomplishes timely running rendezvous.
119. 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. ● Wingman maintains stacked level position through touchdown, and then drops back during rollout.
120. VFR Turns Into	
<ul style="list-style-type: none"> ● Dash 2 is on the inside of the turn while in parade. 	<ul style="list-style-type: none"> ● Maintains parade position.
121. VFR Turns Away	
<ul style="list-style-type: none"> ● Dash 2 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.
122. 45-Degree AOB Turns	
<ul style="list-style-type: none"> ● Dash 2 is on the outside/inside of the turn while executing 45° AOB. 	<ul style="list-style-type: none"> ● Maintains parade position.
123. Crossunder	
<ul style="list-style-type: none"> ● Dash 2 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.
124. Underrun	
<ul style="list-style-type: none"> ● Dash 2 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.

BEHAVIOR STATEMENT	STANDARDS
125. 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.
126. Echelon	
<ul style="list-style-type: none"> ● Maintain close formation when lead turns away. 	<ul style="list-style-type: none"> ● Maintains position IAW FTI.
127. 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.
128. 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.
129. 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.
130. 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
131. Breakout	
<ul style="list-style-type: none"> ● Wingman 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.
132. 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.
133. 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.
134. Tactical Spread	
<ul style="list-style-type: none"> ● Straight and level: <ul style="list-style-type: none"> ▶ Wingman maintains position on lead. ● During turns: <ul style="list-style-type: none"> ▶ Wingman maintains position on lead. 	<ul style="list-style-type: none"> ● Wingman: <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 wingman.
135. 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.

BEHAVIOR STATEMENT	STANDARDS
136. 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 straight-away.
137. Visual Landing Gear Check	
<ul style="list-style-type: none"> ● Comply with NATOPS procedures, checklists, and local course rules. 	<ul style="list-style-type: none"> ● Provides accurate information and description on the condition of the landing gear.

Chapter X

Master Materials List

Individually Issued Materials

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT	COST EACH
1. Academic Programmed Instructional Units	CNAT P	10	\$0.31
2. Flight Training Instructions	CNAT P	6	3.00
3. T-34C NATOPS Flight Manual	NAVAIR 01-T-34 AAC-1	1	3.50
4. T-34C NATOPS Pocket Checklist	NAVAIR 01-T-34 AAC-1B	1	2.00
5. NATOPS Instrument Flight Manual		1	2.50
6. DOD FLIP Publications			
a. Low Altitude Enroute Charts		3	4.04
b. IFR Enroute Supplement		1	1.00
c. Low Altitude Instrument Approach Procedures		2	0.78
d. High Altitude Instrument Approach Procedures		1	0.31
7. Military Flight Plan	DD 175	4	
8. Weather Briefing Form	DD 175-1	20	
9. Flight Crew Checklist		1	

NOMENCLATURE	IDENTIFICATION	QTY PER STUDENT	COST EACH
10. Supporting Materials			
a. T-34C Electrical System	Training Panel	2	
b. T-34C Environmental System	Training Panel	2	
c. T-34C Avionics and AOA System	Training Panel	2	
d. T-34C Preflight Engine Start and Run	Training Panel	2	
e. Computer Control Console	Training Panel	2	
f. Navigation/ Landing	Instrument Training Aid (2B4)	6	
g. T-34C Aircraft Cockpit	Familiarization Training (12BK15 Modified)	6	