NAVAL AIR TRAINING COMMAND

NAS CORPUS CHRISTI, TEXAS **CNATRAINST 1542.154A**
CIN Q-2D-0275 **16 JUN 2010**

CHIEF OF NAVAL AIR TRAINING

PRIMARY AND INTERMEDIATE NAVAL FLIGHT OFFICER T-6A INSTRUCTOR UNDER TRAINING CURRICULUM

2010

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

CNATRAINST 1542.154A
N712
16 JUN 10

CNATRA INSTRUCTION 1542.154A

Subj: PRIMARY AND INTERMEDIATE NAVAL FLIGHT OFFICER (NFO) T-6A INSTRUCTOR UNDER TRAINING (IUT) CURRICULUM

1. Purpose. To issue the curriculum for qualifying Naval Aviators/military pilots to instruct student NFOs in the T-6A Primary and Intermediate phases of training.

2. Cancellation. CNATRAINST 1542.154 will be cancelled when the last enrolled student completes the curriculum.

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

4. Forms. The Aviation Training Forms required by this directive are automated in the Training Integration Management System (TIMS) computer program. This system has been assigned a system form number of CNATRA 1542/2022. CNATRA point of contact is the current Pipeline Training Officer, CNATRA (N712), DSN 861-3903. An update of these forms shall be accomplished no later than the issuance of this curriculum.

Thomas E. Broderick
THOMAS E. BRODERICK
Chief of Staff

LARGE FORMAT (8.5 X 11)
Distribution:
CNATRAINST 5215.1S
List I (E; M (10), S (10); DD, EE, FF)
List III (R (4))

Copy to:
CNO (N789), (NOOT); CMC
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COMTRAWING TWO (COOP File)
CNATRA (N734)

SMALL FORMAT (5.5 X 8.5)
CNATRA Distribution:
CNATRA (N71) (6)
TRAWING SIX (100)

LIST OF EFFECTIVE PAGES

Original

Total number of pages is 128 consisting of the following:

Page Number	Issue
Letter - 2	
3/(4 blank)	
i - ii	
iii/(iv blank)	
v - x	
xi/(xii blank)	
xiii - xvi	
xvii/(xviii blank)	
xix - xx	
I-1 – I-2	
I-3/(I-4 blank)	
I-5 - I-10	
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SUMMARY OF CHANGES

CHANGE NUMBER	DATE OF CHANGE	CHANGE DESCRIPTION	PAGES AFFECTED/ INITIALS

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COURSE DATA

1. Course Title. Primary and Intermediate Naval Flight Officer (NFO) T-6A Instructor Under Training (IUT) Curriculum.

2. Course ID Number. Q-2D-0275.

3. Location. NAS Pensacola, FL 32508-5503.

4. Course Status. Active.

5. Course Mission. Primary and Intermediate NFO T-6A IUT Curriculum is designed to provide designated Naval Aviators and military pilots with the appropriate flight procedures, instructional methodology and techniques to instruct Student Naval Flight Officers (SNFOs) in the Primary and Intermediate phases of flight 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 Requirements. None.

8. Follow-on Training. As required to maintain currency for instructors.

9. Course Length. Overall time to train is calculated in accordance with CNATRAINST 1550.6E. Training days are as follows:

	Training Days	Calendar Weeks
Initial IUT	50.5	11.6
Navigation Upgrade	6.7	1.5
Formation Upgrade	12.1	2.8
Out-of-Control (OCF) Upgrade	3.6	0.8

10. Class Capacity. Variable.

11. Instructor Requirements. One flight instructor per eight Naval Aviators/military pilots undergoing this training.

12. Course Curriculum Model Manager. Commander, Training Air Wing SIX (COMTRAWING SIX).

13. Quota Management Authority. Chief of Naval Air Training.

14. Quota Control. Chief of Naval Operations.

15. Course Training Subjects

a. Initial IUT Ground Training

ADMINISTRATION (ADMIN)		
Block	**Symbol**	**Hours**
Check-In	G0101	3.5
Checkout/Admin	G0108	0.5
Totals		**4.0**

GROUND TRAINING		
Stage	**Symbol**	**Hours**
Egress/Aeromedical Aspects	G0102	2.0
High Risk Screen/Admin Up Chit	G0103	1.0
Crew Resource Management	G0104	2.0
Aircrew Physiology Refresher/RP1	G0105	8.0
Aircrew Swim Refresher/R1	G0106	8.0
Flight Instructor Training Course	G0107	26.0
Aircraft Systems and Exams	G0201-390	35.5
FLIP/Flight Planning	G0401	8.0
Sys/EP/Limits Module and Exam	G0402-3	4.0
Airspace/FWOP, Course Rules Module and Exam	G0404-5	3.0
Out-of-Control Flight (OCF) Module and Exam	G0406-7	2.0
Landing Patterns Module	G0408	1.0
Global Positioning System (GPS) Module	G0409	2.0
Plane Captain Module and Exam	G0410-11	2.0
Instrument Ground School and Exam	G0412-13	8.0
Totals		112.5

b. Initial Flight Support

FLIGHT SUPPORT		
Stage	**Symbol**	**Hours**
NATOPS Open-Book Exam	Q1190	2.0
NATOPS Closed-Book Exam	Q1290	2.0
NATOPS Flight 0	Q1301	4.0
Instrument Stage Prep	I1101	6.0
Instrument Standardization Exam	I1190	1.0
Contact Standardization Exam	C1190	1.0
Totals		16.0

c. Initial Flight Training

INITIAL IUT FLIGHT TRAINING						
Block	**UTD**		**OFT**		**T-6A Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
Cockpit Procedure Training			4	6.0		
NATOPS Qualification			2	3.0	8	14.4
NATOPS Check Flight					1	1.8
NATOPS Instrument Rating Check Flight					1	2.0
Contact					5	9.0
Night Contact					2	4.0
Contact Check Flight					1	1.8
Instruments	2	3.0			2	4.0
Instrument Check Flight					1	2.0
Formation Exposure					1	2.0
Totals	**2**	**3.0**	**6**	**9.0**	**22**	**41.0**

d. Upgrade Ground Training

UPGRADE GROUND TRAINING		
Stage	**Symbol**	**Hours**
OCF Standardization Exam	G0407	1.0
Totals		1.0

e. Upgrade Flight Support

NAVIGATION FLIGHT SUPPORT		
Block	**Symbol**	**Hours**
Navigation	N1101-3	7.0
Navigation Standardization Exam	N1190	1.0
Totals		**8.0**

FORMATION FLIGHT SUPPORT		
Block	**Symbol**	**Hours**
Formation Preparation and Flight Procedures	F1101	2.0
Formation Standardization Exam	F1190	1.0
Totals		**3.0**

f. Upgrade Flight Training

NAVIGATION FLIGHT TRAINING (UPGRADE)						
Block	**UTD**		**OFT**		**T-6A Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
Navigation			1	1.5	3	4.8
Navigation Check Flight					1	1.6
Totals			**1**	**1.5**	**4**	**6.4**

FORMATION FLIGHT TRAINING (UPGRADE)						
Block	**UTD**		**OFT**		**T-6A Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
Formation					9	14.4
Formation Check Flight					1	1.6
Totals					**10**	**16.0**

OCF FLIGHT TRAINING (UPGRADE)						
Block	**UTD**		**OFT**		**T-6A Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
Annual OCF Flight					1	1.6
OCF Standardization Instructor Upgrade					1	1.6
OCF Standardization Instructor Check Flight					1	1.6
Totals					**3**	**4.8**

g. Annual Ground Training

ADDITIONAL IP GROUND TRAINING (ANNUALLY)		
Block	**Symbol**	**Hours**
Crew Resource Management	G0104	2.0
Sys/EP/Limits Exam	G0403	1.0
Airspace/FWOP, Course Rules Exam	G0405	1.0
OCF Standardization Exam	G0407	1.0
Instrument Ground School	G0412	6.0
Instrument Ground School Exam	G0413	2.0
Totals		**13.0**

h. Annual Flight Support

ADDITIONAL IP FLIGHT SUPPORT (ANNUALLY)		
Block	**Symbol**	**Hours**
Instrument Standardization Exam	I1190	1.0
Contact Standardization Exam	C1190	1.0
Navigation Standardization Exam	N1190	1.0
Formation Standardization Exam	F1190	1.0
NATOPS Open-Book Exam	Q1190	2.0
NATOPS Closed-Book Exam	Q1290	2.0
Totals		**8.0**

i. Annual Flight Training

ADDITIONAL IP FLIGHT TRAINING (ANNUALLY)						
Block	**UTD**		**OFT**		**T-6A Dual**	
	Flts	**Hrs**	**Flts**	**Hrs**	**Flts**	**Hrs**
NATOPS Check Flight					1	1.8
Instrument Check Flight					1	2.0
Contact Check Flight					1	1.8
Navigation Check Flight					1	1.6
Formation Check Flight					1	1.6
NATOPS Instrument Rating Check Flight					1	2.0
Annual Emergency Procedures Trainer			1	1.5		
Annual OCF Flight					1	1.6
Totals			**1**	**1.5**	**7**	**12.4**

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

ADDITIONAL FORMAL TRAINING TIME PER EVENT			
Training Area	**Brief/Preflight/Taxi**	**Taxi/ Debrief**	**Total**
Flight	2.0	1.0	3.0
Simulator	1.0	0.7	1.7
Academic and Flight Support	0.25	0.25	0.5

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 for Naval personnel.

19. Primary Instructional Methods. Lecture; computer-assisted instruction (CAI); self- and group-paced study; in-flight instruction.

20. Preceding Curriculum Data. This curriculum replaces 1542.154.

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, who is capable of assessing the environmental and systems factors affecting the condition under which the performance is measured and the student’s experience within the stage.

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ABBREVIATIONS

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

AF	-	Air Force
AGL	-	Above Ground Level
AIM	-	Aeronautical Information Manual
AOA	-	Angle of Attack
AOB	-	Angle of Bank
ASR	-	Airport Surveillance Radar
ATC	-	Air Traffic Control
ATF	-	Aviation Training Form
ATJ	-	Aviation Training Jacket
ATIS	-	Automatic Terminal Information Service
ATS	-	Aviation Training Summary or Approach Turn Stall
AWOS	-	Automated Weather Observation System
BAW	-	Basic Air Work
CAI	-	Computer-Assisted Instruction
CDI	-	Course Deviation Indicator
CNATRA	-	Chief of Naval Air Training
COMTRAWING	-	Commander, Training Air Wing
CR	-	Course Rules
CRM	-	Crew Resource Management
CTS	-	Course Training Standard
DAM CLAS	-	Decision Making, Assertiveness, Mission Analysis, Communication, Leadership, Adaptability/Flexibility, Situational Awareness
DH	-	Decision Height
DME	-	Distance Measuring Equipment

ECS - Environmental Control System

ELP - Emergency Landing Pattern

EOB - End of Block

EP - Emergency Procedure

ETA - Estimated Time of Arrival

ETE - Estimated Time Enroute

FAA - Federal Aviation Administration

FAF - Final Approach Fix

FITC - Flight Instructor Training Course

FITU - Flight Instructor Training Unit

FLIP - Flight Information Publication

FP - Full Panel

FSS - Flight Service Station

FTI - Flight Training Instruction

FWOP - Fixed-Wing Operating Procedures Manual

GCA - Ground-controlled Approach

GPS - Global Positioning System

H/X - Hours per Event

HAPL - High Altitude Power Loss

HEFOE - Hydraulic, Electrical, Fuel, Oxygen, Engine

HFE - Home Field Entry

IAF - Initial Approach Fix

IAW - In Accordance With

IFR - Instrument Flight Rules

IGS - Instrument Ground School

ILS - Instrument Landing System

IMC	-	Instrument Meteorological Conditions
IP	-	Instructor Pilot
ITF	-	Instructor Training Form
ITU	-	Instructor Training Unit
IUT	-	Instructor Under Training
JPATS	-	Joint Primary Aircrew Training System
KIAS	-	Knots Indicated Airspeed
LAPL	-	Low Altitude Power Loss
LDG	-	Landing
LOC	-	Localizer
LOP	-	Loss of Power
MAP	-	Missed Approach Point
MDA	-	Minimum Descent Altitude
MIF	-	Maneuver Item File
MIL	-	Mediated Interactive Lecture
MILPERSMAN	-	Military Personnel Manual
MSL	-	Mean Sea Level
NACWS	-	Naval Aviation Collision Warning System
NAS	-	Naval Air Station
NATOPS	-	Naval Air Training Operating Procedures Standardization
NAVAID	-	Navigational Aid
NFO	-	Naval Flight Officer
NG	-	No Grade
NIFM	-	NATOPS Instrument Flight Manual
NTPS	-	NATOPS

OBOGS	-	On-Board Oxygen Generating System
OCF	-	Out-of-Control Flight
OCFP	-	Out-of-Control Flight Procedures
OFT	-	Operational Flight Trainer
OIC	-	Officer in Charge
OLF	-	Outlying Field
OPNAV	-	Office of the Chief of Naval Operations
OPNAVINST	-	OPNAV Instruction
OPS	-	Operations
ORM	-	Operational Risk Management
P/P	-	Pen/Pencil and Paper
PAR	-	Precision Approach Radar
PCL	-	Power Control Lever; also Pocket Checklist
PEL	-	Precautionary Emergency Landing
PEL (P)	-	Precautionary Emergency Landing (Pattern)
PMSV	-	Pilot-to-Metro Service
PMU	-	Power Management Unit
POS	-	Power-off Stall
PP	-	Partial Panel
R/C	-	Rear Cockpit
RNAV	-	Area Navigation
RVFAC	-	Radar Vectors to Final Approach Course
SI	-	Standardization Instructor
SOP	-	Standard Operating Procedure
SSR	-	Special Syllabus Requirement
SYS	-	Systems

TAS	-	True Airspeed; also Traffic Avoidance System
TIMS	-	Training Integration Management System
TOLD	-	Takeoff and Landing Data
TRAWING	-	Training Air Wing
UHF	-	Ultra High Frequency
UTD	-	Unit Training Device (T-6A)
VFR	-	Visual Flight Rules
VHF	-	Very High Frequency
VMC	-	Visual Meteorological Conditions
VOR	-	VHF Omnidirectional Range
VR	-	Visual Route
WX	-	Weather

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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 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 Flight (XX90). A flight check in any stage of training.

5. Contact. The stage of training that combines day and night flight familiarization, precision aerobatics maneuvers, and visual navigation.

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. 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
1st	Stage	G—Ground I—Instrument F—Formation C—Contact N—Navigation Q—NATOPS
2nd	Media	0—Ground Training 3—Simulator 1—Flight Support 4—Aircraft 2—UTD
3rd	Block	Sequential, indicating block within stage.
4th & 5th	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, NATOPS, 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 TRAWING or Squadron Commander will designate SIs for each stage.

20. Training Media. The media for this syllabus includes aircraft, OFTs, UTDs, 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 like 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, which must be achieved at the completion of each training block.

2. Training Management

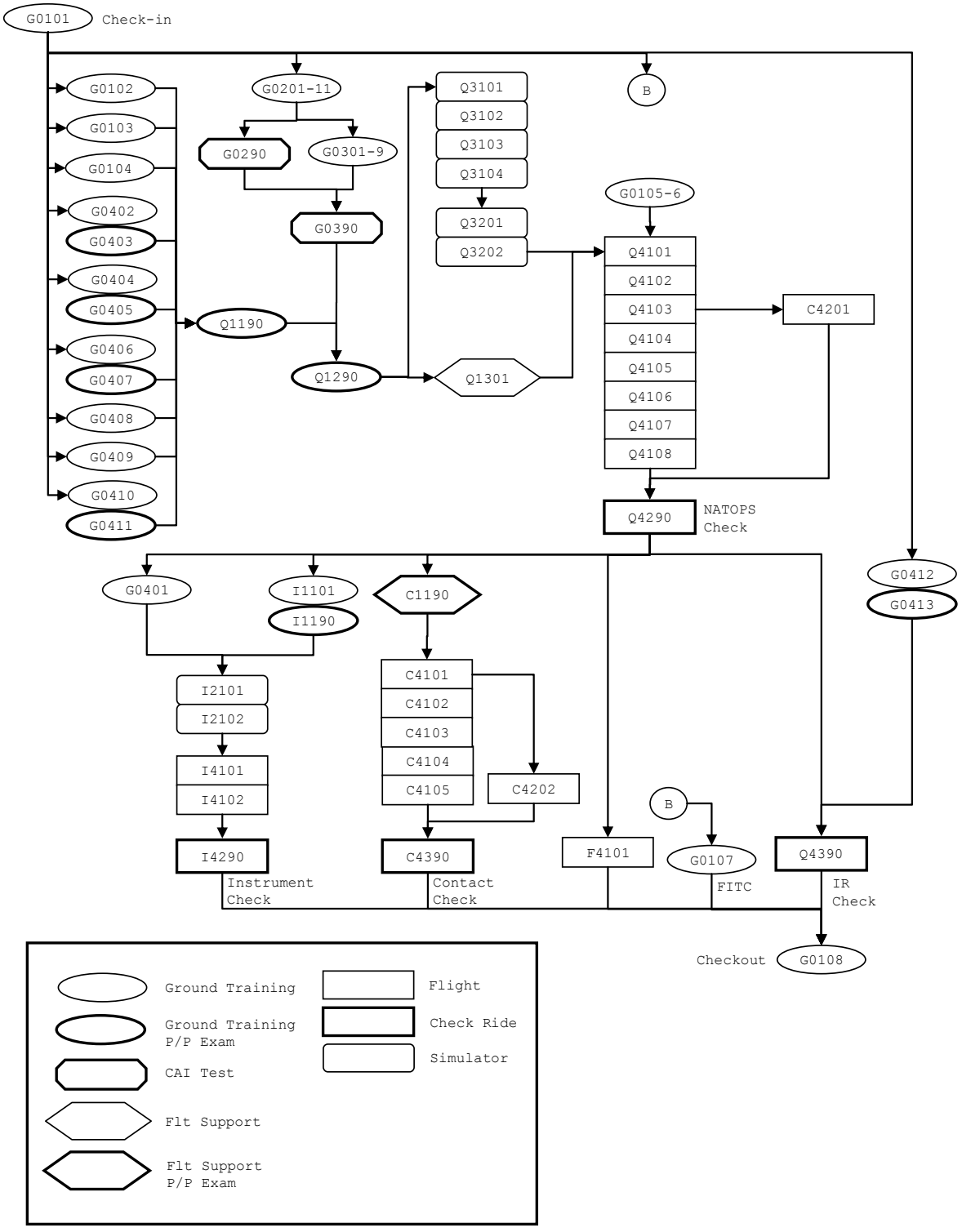
a. Syllabus Progression. Fly events within each stage sequentially, except as noted. Do not start a block without all prerequisites. IUTs may be in different stages simultaneously. Where applicable, IUTs shall be prepared, and will be eligible, for both a VFR (Contact or Formation) and an IFR (Instrument) syllabus event. IUTs must complete all events unless waived by the FITU OIC or TRAWING Commander. System training management is designed to facilitate two graded events (flight, simulator, or exam) per IUT per day.

b. Maneuver Continuity. IUTs must accomplish previously introduced maneuvers frequently enough to ensure required proficiency is maintained.

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.

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.

T-6A INITIAL IUT COURSE FLOW



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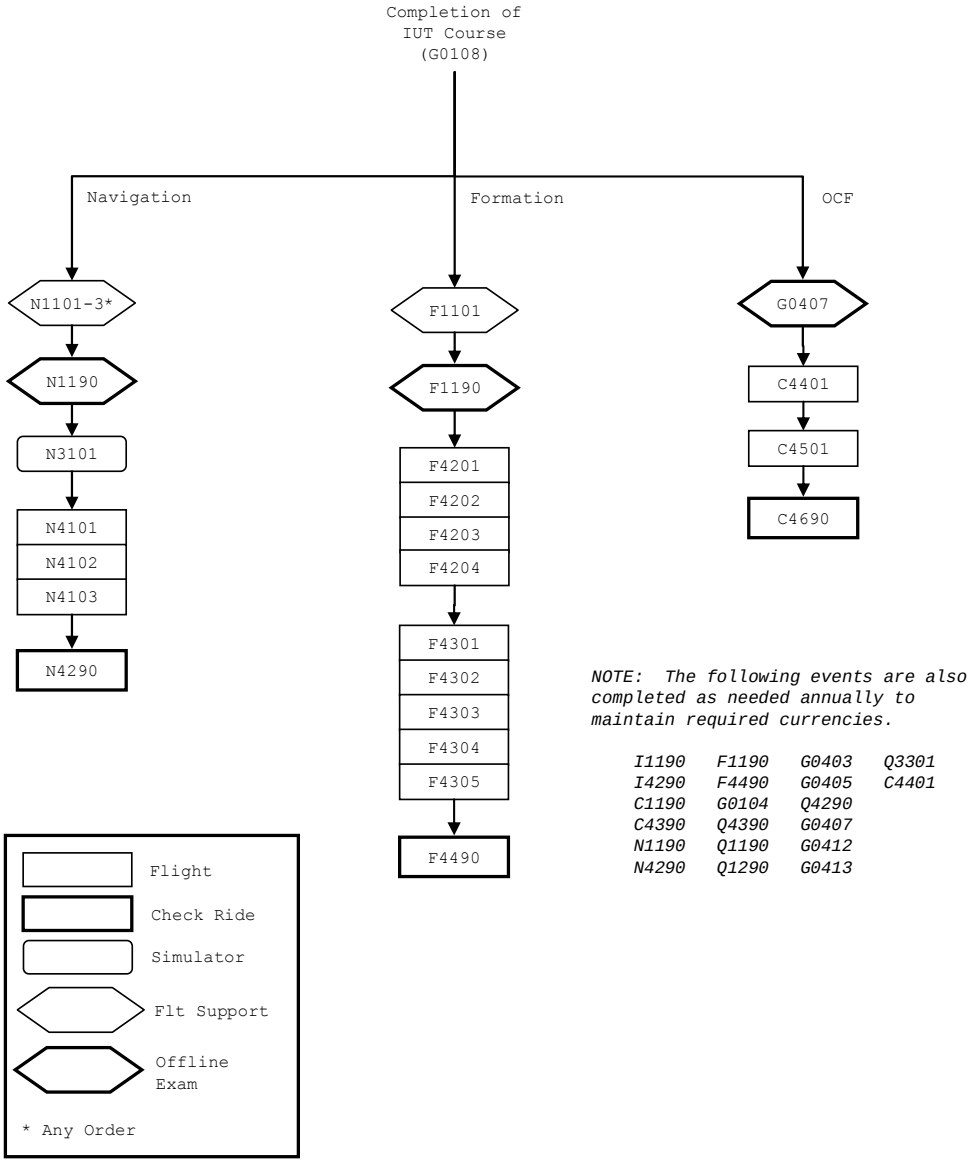
T-6A UPGRADE COURSE FLOW



NOTE: The following events are also completed as needed annually to maintain required currencies.

I1190	*F1190*	*G0403*	*Q3301*
I4290	*F4490*	*G0405*	*C4401*
C1190	*G0104*	*Q4290*	
C4390	*Q4390*	*G0407*	
N1190	*Q1190*	*G0412*	
N4290	*Q1290*	*G0413*	

3. Ground Training and Briefing Requirements, Mission Preparation, Briefings, and Debriefings

a. EOB events. The SI shall carefully review the ATJ 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.

b. Preparation. The IUT shall arrive for each flight with:

(1) Thorough knowledge of:

(a) The flight's "Discuss" items as listed in Chapter III-VIII.

(b) Procedural knowledge of the critical items for the event's training block.

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

c. Briefing. Thoroughly cover the mission's:

(1) Specific objectives.

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

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

d. Debriefing

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

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

(3) The SI shall provide the IUT with a copy of the event's ITF.

4. Mission Grading Procedures and Evaluation Policies

a. General Evaluation Policy. Course training standards 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 Flight, will be pass/fail.

(b) The overall grade for the NATOPS Check Flight (Q4290) 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 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 their 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:

Q3101	Q3104	Q4101	Q4104	Q4107	Q4390
Q3102	Q3201	Q4102	Q4105	Q4108	Q3301
Q3103	Q3202	Q4103	Q4106	Q4290	

Judge the proficiency of the IUT or transition student 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.

c. 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.

d. Maneuver Requirements. For each block:

(1) Items with a number and a plus (+) are mandatory and must meet the required proficiency by EOB. When a maneuver is performed multiple times in a block of training, the last grade assigned for the maneuver will determine if the IUT meets EOB MIF.

(2) Items with a number, but without a plus (+), are optional. However, if flown, they must meet the required EOB proficiency the last time the maneuver is graded in the block.

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.

6. Policies for Evaluation Flights and Ground Evaluations

a. Check Flights (SXX90). Check flights 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 flight 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 flights and IUTs may reaccomplish maneuvers at the SI's discretion.

b. Incomplete Check Flight. 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 FITU or cognizant squadron, but consistent with the provisions of OPNAVINST 3710.7U.

b. All IUT flights will be conducted in accordance with the current T-6A NATOPS, FTIs, and local SOPs. 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-6A aircraft.

d. Reasonable accelerations and decelerations in the curriculum are authorized when warranted by previous experience or demonstrated ability; combination of any two events is authorized. Accelerations of the curriculum require TRAWING Commander approval and shall be annotated in writing in the ITJ.

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.

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Chapter II

Ground Training

Block #	Media	Title	Events	Hrs	Category
G01	Class	Administration/ Indoctrination	8	51.0	ASI

1. Prerequisites

   a. G0101 prior to G0102, G0103, G0104, and G0107.

   b. G0105 prior to G0106.

   c. G0107, I4290, C4390, F4101, and Q4390 prior to G0108.

2. Events

G0101	Admin	ITU Check-In	3.5
G0102	Lect/ Lab	Egress/Aeromedical Aspects	2.0
G0103	Admin	High Risk Screen/Admin Up Chit	1.0
G0104	Lect	T-6A Crew Resource Management	2.0
G0105	Lect/ Lab	Aircrew Physiology Refresher/RP1	8.0
G0106	Lect/ Lab	Aircrew Swim Refresher/R1	8.0
G0107	Lect	FITC	26.0
G0108	Admin	ITU Checkout/Admin	0.5

3. Syllabus Notes. G0104 is required annually to fulfill currency requirements.

4. Discuss Items. None.

Block #	Media	Title	Events	Hrs	Category
G02/03	Class	Systems	22	35.5	See Below

1. Prerequisites

   a. G0101 prior to G0201 and G0202-11 (in order).

   b. G0211 prior to G0290 and G0301-9 (in order).

   c. G0290 and G0309 prior to G0390.

2. Events

G0201	Lab	T-6A Aircraft Systems Tour	2.0	SYS1
G0202	JPATS CAI	Flight Controls	1.5	SYS1
G0203	JPATS CAI	Hydraulic Systems, Part 1	1.5	SYS1
G0204	JPATS CAI	Hydraulic Systems, Part 2	1.5	SYS1
G0205	JPATS MIL	Systems Review 1	2.0	SYS1
G0206	JPATS CAI	Flight Instruments, Part 1	2.0	SYS1
G0207	JPATS CAI	Flight Instruments, Part 2	1.5	SYS1
G0208	JPATS CAI	Communication Systems	2.0	SYS1
G0209	JPATS CAI	Navigation Systems	2.0	SYS1
G0210	JPATS CAI	GPS	1.0	SYS1
G0211	JPATS MIL	Systems Review 2	3.5	SYS1
G0290	JPATS CAI Test	SYS 1 Exam and Critique	2.0	SYS1

2. Events (Cont)

G0301	JPATS CAI	Electrical System	1.5	SYS2
G0302	JPATS CAI	Fuel System	1.0	SYS2
G0303	JPATS CAI	Propulsion 1	2.0	SYS2
G0304	JPATS CAI	Propulsion 2	1.0	SYS2
G0305	JPATS CAI	Environmental System 1	1.0	SYS2
G0306	JPATS CAI	Environmental System 2	0.5	SYS2
G0307	JPATS CAI	Canopy System	0.5	SYS2
G0308	JPATS CAI	Ejection System	1.5	SYS2
G0309	JPATS MIL	Systems Review 3	2.0	SYS2
G0390	JPATS CAI Test	SYS 2 Exam and Critique	2.0	SYS2

3. Syllabus Notes. None.

4. Discuss Items. None.

Block #	Media	Title	Events	Hrs	Category
G04	Class	NATOPS Qualification Training	13	30.0	See Below

1. Prerequisite

a. G0101 prior to G0402, G0404, G0406, G0408, G0409, G0410, and G0412 (any order).

b. Q4290 prior to G0401 – IUT only.

c. G0402 prior to G0403, G0404 prior to G0405, G0406 prior to G0407, G0410 prior to G0411, and G0412 prior to G0413.

2. Events

G0401	MIL	FLIP/Flight Planning	8.0	NTPS1
G0402	Lect	Sys/EP/Limits Module	3.0	EP
G0403	P/P Exam	Sys/EP/Limits Exam	1.0	EP
G0404	Lect	Airspace/FWOP, Course Rules Module	2.0	CR
G0405	P/P Exam	Course Rules Exam	1.0	CR
G0406	Lect	OCF Module	1.0	OCFP
G0407	P/P Exam	OCF Exam	1.0	OCFP
G0408	Lect	Landing Patterns Module	1.0	NTPS1
G0409	Lab	GPS Module	2.0	NTPS1
G0410	Lect	Plane Captain Module	1.0	NTPS1
G0411	P/P Exam	Plane Captain Exam	1.0	NTPS1
G0412	Lect	Instrument Ground School	6.0	IGS
G0413	P/P Exam	Instrument Ground School Exam	2.0	IGS

3. Syllabus Notes. G0403, G0405, G0407, and G0413 are required annually to fulfill currency requirements.

4. Discuss Items. None.

Chapter III

NATOPS Training

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

Simulator/Device Event
Check Flight Event

N = NATOPS CTS

NATOPS STAGE MANEUVER ITEM FILE						
CTS REF	**MANEUVER**	**Q3104**	**Q3202**	**Q4108**	**Q4290**	**Q4390**
1	General Knowledge/Procedures	4+	4+	4+	4+	
2	Emergency Procedures	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+	4+	
4	Basic Air Work	3+	3+	4+	4+	
6	In-Flight Planning/ Area Orientation		3+	4+	4+	
7	In-Flight Checks		3+	4+	4+	
8	Radio Procedures		3+	4+	4+	
9	Ground Operations			4+	4+	
10	Takeoff			4+	4+	
11	Departure		3+	4+	4+	
12	Trim	3+	3+	4+	4+	
13	VFR Scan			4+	4+	
17	POS			4+		
18	ATS			4+	4+	
19	Spin			4+	4+	
83	Control Release Spin			4+		

MIF continued on next page.

NATOPS STAGE MANEUVER ITEM FILE						
CTS REF	**MANEUVER**	**Q3104**	**Q3202**	**Q4108**	**Q4290**	**Q4390**
85	Progressive Spin			4+		
34	Loop			4+	4	
35	Wingover			4+	4	
36	Barrel Roll			4+	4	
33	Aileron Roll			4+	4	
38	Split-S			4+	4	
37	One-Half Cuban Eight			4+	4	
39	Immelmann			4+	4	
87	Inverted Flight			4+	4+	
86	OCF Recovery			4+	4+	
32	VFR Unusual Attitude Recovery			4+	4+	
20	Simulated Power Loss (High)			4+	4+	
21	Simulated Power Loss (Low)			4+	4+	
22	PEL			4+	4+	
25	AOA Approaches			4	4	
25 27	Takeoff Flap Approach/ Takeoff Flap Landing			4+	4+	
25 26	Ldg Flap Approach/ Ldg Flap Landing			4+	4+	
25 28	No Flap Approach/ No Flap Landing			4+	4+	
29	Waveoff			4+	4	
30	PEL (P)			4+	4+	
53	VOR Holding		3+	4+	4	
54	GPS Holding		3+	4+	4	
44	IMC Unusual Attitudes (FP/PP)		3+	4+		
60	PAR Approach		3+	4+	4	
61	No Gyro GCA			4+		

MIF continued on next page.

NATOPS STAGE MANEUVER ITEM FILE						
CTS REF	**MANEUVER**	**Q3104**	**Q3202**	**Q4108**	**Q4290**	**Q4390**
55	VOR Approach		3+	4+	4	
58	ILS Approach		3+	4+	4	
66	ASR Approach		3+	4+	4	
56	GPS Approach		3+	4+	4	
57	Localizer Approach		3	4+	4	
59	Circling Approach			4+		
31	Course Rules/HFE			4+	4	
N	Abort Start	4+				
N	PMU Off Ground Start	4+				
N	Fire Warning on Ground (Fire Annunciator Illuminated)	4+				
N	Emergency Engine Shutdown	4+				
N	Emergency Ground Egress	4+				
N	Abort Takeoff	4+				
N	Aircraft Departs Prepared Surface	4+				
N	Engine Failure Immediately After Takeoff	4+				
N	Engine Failure During Flight	4+				
N	PMU Norm Airstart	4+				
N	PMU Off Airstart	4+				
N	Immediate Airstart	4+				
N	Uncommanded Propeller Feather	4+				
N	Uncommanded Power Changes/LOP	4+				
N	Fire Warning in Flight (Fire Annunciator Illuminated)	4+				
N	Smoke and Fume Elimination	4+				
N	PMU Failure	4+				
N	Chip Detector Warning	4+				

MIF continued on next page.

NATOPS STAGE MANEUVER ITEM FILE						
CTS REF	**MANEUVER**	**Q3104**	**Q3202**	**Q4108**	**Q4290**	**Q4390**
N	Oil System Malfunction or Low Oil Press	4+				
N	Electrical Failures	4+				
N	Avionics Failures	4+				
N	Fuel System Failures	4+				
N	Hydraulic System Failures	4+				
N	OBOGS System Fail	4+				
N	Trim System Malfunctions	4+				
N	Controlled Ejection	4+				
N	Uncontrolled Ejection	4+				
N	Precautionary Emergency Landing	4+				
N	Landing Gear Emergency Extension	4+				
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	Voice Procedures					4+
24	Landing Pattern			4+	4+	
	Special Syllabus Requirements			1		

Block #	Media	Title	Events	Hrs	Category
Q11/12/13	Class	NATOPS	3	8.0	See Below

1. Prerequisites

a. G0102, G0103, G0104, G0403, G0405, G0407, G0408, G0409, and G0411 prior to Q1190 – IUT only.

b. Q1190 prior to Q1290.

c. Q1290 prior to Q1301 – IUT only.

2. Events

Q1190	P/P Exam	NATOPS Open-Book Exam	2.0	NTPS2
Q1290	P/P Exam	NATOPS Closed-Book Exam	2.0	NTPS3
Q1301	Lect	NATOPS Flight 0	4.0	NTPS4

3. Syllabus Notes. Events Q1190 and Q1290 are required annually to fulfill currency requirements.

4. Discuss Items. During Q1301, demonstrate preflight, postflight, cockpit introduction (to include strapping in, helmet hookup, and operation of O_2 mask), emergency egress, and ejection seat procedures. Discuss scheduling, brief and debrief, flight gear check, aircraft issue, weight and balance, aircraft discrepancy reporting, course training standards, exams, flight training instruction reference material, TAS, and NACWS operation/limitations.

Block #	Media	Title	Events	Hrs	H/X
Q31	OFT	Cockpit Procedure Training	4	6.0	1.5

1. Prerequisite. Q1290 (NATOPS Closed-Book Exam).

2. Syllabus Notes. The following procedures will be performed by the IUT on the indicated event:

Q3101
All normal checklists, abort start (PMU abort, hung, and no start), non-PMU abort (hot start), fire warning on ground, emergency engine shutdown, and emergency ground egress.

Q3102
All normal checklists, aborted takeoff, aircraft departs prepared surface, engine failure during flight (flameout, seized engine, loss of power), immediate airstart, landing gear emergency extension, fire warning in flight, and controlled ejection.

Q3103
All normal checklists, engine failure immediately after takeoff, PMU normal airstart, PMU off airstart, uncommanded prop feather, uncommanded power changes, smoke and fume elimination, electrical failures (bus tie inoperative, battery bus inoperative, generator inoperative), fuel system failures (imbalance on ground in ramp area, low fuel pressure in flight), hydraulic system failures, and uncontrolled ejection.

Q3104
All normal checklists, PMU failure, chip detector warning, oil system malfunction, OBOGS system failures, trim system malfunctions (rudder yaw right, elevator trim failure), PEL, landing gear emergency extension, forced landing via high key (HAPL), and forced landing from below high key (LAPL).

3. Special Syllabus Requirements. None.

4. Discuss Items

Q3101
All normal operating procedures and Q3101 required emergency procedures.

Q3102
All Q3102 required emergency procedures.

Q3103
All Q3103 required emergency procedures.

Q3104
All Q3104 required emergency procedures and any additional items required to complete Q31XX block.

5. Block MIF

CTS REF	MANEUVER	Q3104
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	3+
12	Trim	3+
N	Abort Start	4+
N	PMU Off Ground Start	4+
N	Fire Warning on Ground (Fire Annunciator Illuminated)	4+
N	Emergency Engine Shutdown	4+
N	Emergency Ground Egress	4+
N	Abort Takeoff	4+
N	Aircraft Departs Prepared Surface	4+
N	Engine Failure Immediately After Takeoff	4+
N	Engine Failure During Flight	4+
N	PMU NORM Airstart	4+
N	PMU OFF Airstart	4+
N	Immediate Airstart	4+
N	Uncommanded Propeller Feather	4+
N	Uncommanded Power Changes/LOP	4+
N	Fire Warning in Flight (Fire Annunciator Illuminated)	4+

MIF continued on next page.

CTS REF	MANEUVER	Q3104
N	Smoke and Fume Elimination	4+
N	PMU Failure	4+
N	Chip Detector Warning	4+
N	Oil System Malfunction or Low Oil Press	4+
N	Electrical Failures	4+
N	Avionics Failures	4+
N	Fuel System Failures	4+
N	Hydraulic System Failures	4+
N	OBOGS System Fail	4+
N	Trim System Malfunctions	4+
N	Controlled Ejection	4+
N	Uncontrolled Ejection	4+
N	Precautionary Emergency Landing	4+
N	Landing Gear Emergency Extension	4+

Block #	Media	Title	Events	Hrs	H/X
Q32	OFT	NATOPS	2	3.0	1.5

1. Prerequisite. Q3104.

2. Syllabus Note. A minimum of one VOR approach and two VOR/GPS holding entries/patterns shall be flown in the Q32 block.

3. Special Syllabus Requirements. None.

4. Discuss Items

Q3201
Departure procedures, VOR holding procedures, VOR approach procedures, and GPS procedures and approaches.

Q3202
GCA procedures, partial panel flight, ASR approach, GPS approach, ILS approach, and localizer approach.

5. Block MIF

CTS REF	MANEUVER	Q3202
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	3+
6	In-Flight Planning/Area Orientation	3+
7	In-Flight Checks	3+
8	Radio Procedures	3+
11	Departure	3+
12	Trim	3+
53	VOR Holding	3+
54	GPS Holding	3+
44	IMC Unusual Attitudes (FP)	3+
60	PAR Approach	3+
55	VOR Approach	3+
58	ILS Approach	3+
66	ASR Approach	3+
56	GPS Approach	3+
57	Localizer Approach	3

Block #	Media	Title	Events	Hrs	H/X
Q41	T-6A	NATOPS	8	14.4	1.8

1. Prerequisites

   a. Q3202.

   b. G0106 (Aircrew Swim Refresher/R1).

2. Syllabus Notes. All NATOPS flights shall be flown from the front cockpit, unless specifically planned as an instrument event. If planned as an instrument event, the IUT may fly from the rear cockpit to facilitate training and safety.

3. Special Syllabus Requirements

   Q4101
   Stall characteristics and cockpit setup.

   Q4102
   Spiral characteristics, spin characteristics, and aborted takeoff.

   Q4103
   GPS operation and instrument procedures.

   Q4104
   OCF/unusual attitude recovery.

4. Discuss Items

   Q4101
   Local area flying procedures, ground ops/emergencies, engine failure during flight, airstart, uncommanded prop feather, compressor stall, OCF, fire warning during flight, smoke and fume elimination, ejection, ELP, landing gear emergency extension, and takeoff emergencies.

   Q4102
   Local area flying procedures, hydraulic system failures, landing emergencies, crosswind takeoff/landing, wake turbulence, wet runway landing, hard landing, TOLD definitions, and chip light.

Q4103
Uncommanded power change/LOP, PMU fault, PMU failure, electrical failure, avionics failure, radio failure (VMC/IMC), lost procedures, and oil system malfunction.

Q4104
Controllability check, trim malfunctions, canopy damage, loss of canopy, canopy unlocked, wing flap failure, thunderstorm penetration, icing restrictions, bird strike, high-speed dive recovery, and fuel system malfunction.

Q4105
Local area flying procedures, physiological incident, OBOGS failure, OBOGS overtemp, ECS duct overtemp, cockpit overpressurization, rapid decompression, diversion, and prohibited maneuvers.

Q4106
Engine oil; propeller; and fuel systems operation, limitations, and associated emergency procedures.

Q4107
Hydraulic system; landing gear; and emergency landing gear and flap operation, limitations, and associated emergency procedures.

Q4108
Electrical system; pressurization; and OBOGS operation, limitations, and associated emergency procedures. NATOPS check requirements and preparation.

5. Block MIF

CTS REF	MANEUVER	Q4108
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+

MIF continued on next page.

CTS REF	MANEUVER	Q4108
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
17	POS	4+
18	ATS	4+
19	Spin	4+
83	Control Release Spin	4+
85	Progressive Spin	4+
34	Loop	4+
35	Wingover	4+
36	Barrel Roll	4+
33	Aileron Roll	4+
38	Split-S	4+
37	One-Half Cuban Eight	4+
39	Immelmann	4+
87	Inverted Flight	4+
86	OCF Recovery	4+
32	VFR Unusual Attitude Recovery	4+
20	Simulated Power Loss (High)	4+
21	Simulated Power Loss (Low)	4+
22	PEL	4+
25	AOA Approaches	4
25 27	Takeoff Flap Approach/ Takeoff Flap Landing	4+
25 26	Ldg Flap Approach/ Ldg Flap Landing	4+
25 28	No Flap Approach/ No Flap Landing	4+

MIF continued on next page.

CTS REF	MANEUVER	Q4108
29	Waveoff	4+
30	PEL (P)	4+
53	VOR Holding	4+
54	GPS Holding	4+
44	IMC Unusual Attitudes (FP/PP)	4+
60	PAR Approach	4+
61	No Gyro GCA	4+
55	VOR Approach	4+
58	ILS Approach	4+
66	ASR Approach	4+
56	GPS Approach	4+
57	Localizer Approach	4+
59	Circling Approach	4+
31	Course Rules/HFE	4+
24	Landing Pattern	4+
	Special Syllabus Requirements	1

Block #	Media	Title	Events	Hrs	H/X
Q42	T-6A	NATOPS Check Flight	1	1.8	1.8

1. Prerequisites

a. Q4108 – IUT only.

b. C4201 – IUT only.

c. Q1290 – Annual check only.

2. Syllabus Notes

a. Comprehensive check of introduced maneuvers in accordance with section 8, chapter 3 of the T-6A NATOPS flight manual and the CNATRAINST 3710.13F.

b. Discuss procedures with IUTs for securing the R/C for solo flight.

c. This event is required annually to fulfill currency requirements.

d. IUTs shall fly a minimum of two aerobatic maneuvers, one holding pattern, and two instrument approaches. For annual currency requirements, a minimum of two aerobatic maneuvers shall be performed.

e. If annual CRM flight evaluation was conducted in conjunction with the NATOPS Check, it shall be noted in the remarks section of the OPNAVINST 3710/7 NATOPS Rating Request Form.

3. Special Syllabus Requirements. None.

4. Discuss Items

a. IUTs – Any system, emergency procedure or limitation, weight and balance, takeoff and landing data, and publications review.

b. Annual currency requirement – discuss any system, any emergency procedure.

5. Block MIF

CTS REF	MANEUVER	Q4290
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
18	ATS	4+
19	Spin	4+
34	Loop	4
35	Wingover	4
36	Barrel Roll	4
33	Aileron Roll	4
38	Split-S	4
37	One-Half Cuban Eight	4
39	Immelmann	4
87	Inverted Flight	4+
86	OCF Recovery	4+
32	VFR Unusual Attitude Recovery	4+
20	Simulated Power Loss (High)	4+
21	Simulated Power Loss (Low)	4+
22	PEL	4+

MIF continued on next page.

CTS REF	MANEUVER	Q4290
25	AOA Approaches	4
25 27	Takeoff Flap Approach/Takeoff Flap Landing	4+
25 26	Ldg Flap Approach/Ldg Flap Landing	4+
25 28	No Flap Approach/No Flap Landing	4+
29	Waveoff	4
30	PEL (P)	4+
53	VOR Holding	4
54	GPS Holding	4
60	PAR Approach	4
55	VOR Approach	4
58	ILS Approach	4
66	ASR Approach	4
56	GPS Approach	4
57	Localizer Approach	4
31	Course Rules/HFE	4
24	Landing Pattern	4+

Block #	Media	Title	Events	Hrs	H/X
Q43	T-6A	NATOPS Instrument Rating Check Flight	1	2.0	2.0

1. Prerequisites

a. Q4290.

b. G0413 (Instrument Ground School Exam).

2. Syllabus Notes

a. Nonplussed 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 Rating Check Flight, it shall be noted in the remarks section of the OPNAV 3710/2 NATOPS Instrument Rating Request Form.

c. This event is required annually to fulfill currency requirements.

3. Special Syllabus Requirements. None.

4. Discuss Items. 3710 and SOP filing minimums, IFR flight procedures, and departure, and destination weather alternates.

5. Block MIF

CTS REF	MANEUVER	Q4390
2	Emergency Procedures	4+
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	Voice Procedures	4+

Block #	Media	Title	Events	Hrs	H/X
Q33	OFT	Annual Emergency Procedures Trainer	1	1.5	1.5

1. Prerequisite. None.

2. Syllabus Notes. This event is required for annual currency requirements only. For these requirements, IP shall complete a minimum of 10 emergencies.

3. Special Syllabus Requirements. None.

4. Discuss Items. Any emergency procedure.

5. Block MIF

CTS REF	MANEUVER	Q3301
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
N	Abort Start	4
N	PMU Off Ground Start	4
N	Fire Warning on Ground (Fire Annunciator Illuminated)	4
N	Emergency Engine Shutdown	4
N	Emergency Ground Egress	4
N	Abort Takeoff	4
N	Aircraft Departs Prepared Surface	4
N	Engine Failure Immediately After Takeoff	4
N	Engine Failure During Flight	4+
N	PMU NORM Airstart	4
N	PMU OFF Airstart	4
N	Immediate Airstart	4+
N	Uncommanded Propeller Feather	4

MIF continued on next page.

CTS REF	MANEUVER	Q3301
N	Uncommanded Power Changes/LOP	4+
N	Fire Warning in Flight (Fire Annunciator Illuminated)	4
N	Smoke and Fume Elimination	4
N	PMU Failure	4
N	Chip Detector Warning	4
N	Oil System malfunction or Low Oil Press	4
N	Electrical Failures	4
N	Avionics Failures	4
N	Fuel System Failures	4
N	Hydraulic System Failures	4
N	OBOGS System Fail	4
N	Trim System Malfunctions	4
N	Controlled Ejection	4+
N	Uncontrolled Ejection	4+
N	Precautionary Emergency Landing	4+
N	Landing Gear Emergency Extension	4+

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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 Flight Event

CONTACT STAGE MANEUVER ITEM FILE							
CTS REF	**MANEUVER**	**C4105**	**C4202**	**C4390**	**C4401**	**C4501**	**C4690**
1	General Knowledge/ Procedures	4+	4+	4+	4+	4+	4+
2	Emergency Procedures	4+	4+	4+	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+	4+	4+	4+
4	Basic Air Work	4+	4+	4+	4+	4+	4+
6	In-Flight Planning/Area Orientation	4+	4+	4+	4+	4+	4+
7	In-Flight Checks	4+	4+	4+	4+	4+	4+
8	Radio Procedures	4+	4+	4+	4+	4+	4+
9	Ground Operations	4+	4+	4+	4+	4+	4+
10	Takeoff	4+	4+	4+			
11	Departure	4+	4+	4+			
12	Trim	4+	4+	4+	4+	4+	4+
13	VFR Scan	4+	4+	4+	4+	4+	4+
16	Turn Pattern	4+		4+			
14	Level Speed Change	4+		4+			
17	POS	4+		4+	4+	4+	4+
18	ATS	4+		4+	4+	4+	4+

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE							
CTS REF	**MANEUVER**	**C4105**	**C4202**	**C4390**	**C4401**	**C4501**	**C4690**
19	Spin	4+		4+	4+	4+	4+
84	Controls Neutral Spin Recovery				4+	4+	4+
85	Progressive Spin				4+	4+	4+
34	Loop	4+		4+			
35	Wingover	4+		4+			
36	Barrel Roll	4+		4+			
33	Aileron Roll	4+		4+			
38	Split-S	4+		4+			
37	One-Half Cuban Eight	4+		4+			
39	Immelmann	4+		4+			
86	OCF Recovery	4+		4+	4+	4+	4+
32	VFR Unusual Attitude Recovery	4+		4+			4+
20	Simulated Power Loss (High)	4+		4+			
21	Simulated Power Loss (Low)	4+		4+			
22	PEL	4+	4+	4+			
25	AOA Approaches	4	4	4			
24	Landing Pattern	4+	4+	4+			
30	PEL (P)	4+	4+	4+			
25 27	Takeoff Flap Approach/ Takeoff Flap Landing	4+	4+	4+			
25 26	Ldg Flap Approach/ Ldg Flap Landing	4+	4+	4+			
25 28	No Flap Approach/ No Flap Landing	4+	4+	4+			
42	VFR Straight-In	4+	4	4			
29	Waveoff	4+		4+			
55	VOR Approach		4				

MIF continued on next page.

CONTACT STAGE MANEUVER ITEM FILE							
CTS REF	**MANEUVER**	**C4105**	**C4202**	**C4390**	**C4401**	**C4501**	**C4690**
56	GPS Approach		4				
57	Localizer Approach		4				
58	ILS Approach		4				
60	PAR Approach		4				
31	Course Rules/HFE	4+	4	4			
23	OLF Operations	4+	4	4+			
88	Spiral					4+	4+

Block #	Media	Title	Events	Hrs	Category
C11	Class	Contact Ground Training	1	1.0	Contact

1. Prerequisite. Q4290 – IUT only.

2. Events

C1190	P/P Exam	Contact Standardization Exam		1.0

3. Syllabus Notes. This event is required annually to fulfill currency requirements.

4. Discuss Items. None.

Block #	Media	Title	Events	Hrs	H/X
C41	T-6A	Contact	5	9.0	1.8

1. Prerequisite. C1190 (Contact Standardization Exam).

2. Syllabus Note. Contact and instrument training may be conducted concurrently.

3. Special Syllabus Requirements. None.

4. Discuss Items

C4101
Working area/outlying field operations, C4001/C4002 (1542.155B) briefing items/profile, and course rules.

C4102
VFR touch-and-go pattern chalkboard brief (IUT brief), and C4003/C4004 (1542.155B) profile/briefing items.

C4103
Emergency landing pattern chalkboard brief (IUT brief), emergency field selection, aerobatics (loop, aileron roll, barrel roll, wingover, split-S, Immelmann, one-half Cuban-eight), and OCF recovery.

C4104
OCF recognition and recovery, spin versus spiral flight characteristics, common student spin and stall errors, spin and stall defensive positioning, Contact defensive positioning, and Contact common student errors.

C4105
Aborted takeoff, defensive positioning, and nontower- and tower-controlled field operations.

5. Block MIF

CTS REF	MANEUVER	C4105
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
16	Turn Pattern	4+
14	Level Speed Change	4+
17	POS	4+
18	ATS	4+
19	Spin	4+
34	Loop	4+
35	Wingover	4+
36	Barrel Roll	4+
33	Aileron Roll	4+
38	Split-S	4+
37	One-Half Cuban Eight	4+
39	Immelmann	4+
86	OCF Recovery	4+
32	VFR Unusual Attitude Recovery	4+
20	Simulated Power Loss (High)	4+
21	Simulated Power Loss (Low)	4+

MIF continued on next page.

CTS REF	MANEUVER	C4105
22	PEL	4+
25	AOA Approaches	4
24	Landing Pattern	4+
30	PEL (P)	4+
25 27	Takeoff Flap Approach/ Takeoff Flap Landing	4+
25 26	Ldg Flap Approach/ Ldg Flap Landing	4+
25 28	No Flap Approach/ No Flap Landing	4+
42	VFR Straight-In	4+
29	Waveoff	4+
31	Course Rules/HFE	4+
23	OLF Operations	4+

Block #	Media	Title	Events	Hrs	H/X
C42	T-6A	Night Contact	2	4.0	2.0

1. Prerequisites

a. Q4103 prior to C4201.

b. C4101 prior to C4202.

2. Syllabus Notes

a. C4201 may be flown anytime after Q4103, but prior to Q4290.

b. C4202 may be flown anytime after C4101, but prior to C4390.

c. A minimum of one emergency landing pattern shall be flown on each event.

3. Special Syllabus Requirements. None.

4. Discuss Items

C4201
Night flying considerations, cockpit and aircraft lighting, and common night flying errors.

C4202
Night flying considerations, aircraft lighting, common night flying errors, and C4101 (1542.155B) profile/briefing items.

5. Block MIF

CTS REF	MANEUVER	C4202
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
22	PEL	4+
25	AOA Approaches	4
24	Landing Pattern	4+
30	PEL (P)	4+
25 27	Takeoff Flap Approach/ Takeoff Flap Landing	4+
25 26	Ldg Flap Approach/ Ldg Flap Landing	4+
25 28	No Flap Approach/ No Flap Landing	4+
42	VFR Straight-In	4
55	VOR Approach	4
56	GPS Approach	4
57	Localizer Approach	4
58	ILS Approach	4
60	PAR Approach	4
31	Course Rules/HFE	4
23	OLF Operations	4

Block #	Media	Title	Events	Hrs	H/X
C43	T-6A	Contact Check Flight	1	1.8	1.8

1. Prerequisites

   a. C4105 - IUT.

   b. C4202 - IUT.

   c. C1190 (Contact Stan Exam) - Annual Check.

2. Syllabus Notes. This event is required annually to fulfill annual currency requirements.

3. Special Syllabus Requirements. None.

4. Discuss Items

   C4390 (Initial Check)
   Defensive positioning, common student errors, prohibited student maneuvers, and any Contact maneuver/current standardization topic.

   C4390 (Annual Check)
   Prohibited student maneuvers, and any Contact maneuver/current standardization topic.

5. Block MIF

CTS REF	MANEUVER	C4390
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+

MIF continued on next page.

CTS REF	MANEUVER	C4390
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
16	Turn Pattern	4+
14	Level Speed Change	4+
17	POS	4+
18	ATS	4+
19	Spin	4+
34	Loop	4+
35	Wingover	4+
36	Barrel Roll	4+
33	Aileron Roll	4+
38	Split-S	4+
37	One-Half Cuban Eight	4+
39	Immelmann	4+
86	OCF Recovery	4+
32	VFR Unusual Attitude Recovery	4+
20	Simulated Power Loss (High)	4+
21	Simulated Power Loss (Low)	4+
22	PEL	4+
25	AOA Approaches	4
24	Landing Pattern	4+
30	PEL (P)	4+
25 27	Takeoff Flap Approach/ Takeoff Flap Landing	4+
25 26	Ldg Flap Approach/Ldg Flap Landing	4+
25 28	No Flap Approach/No Flap Landing	4+
42	VFR Straight-In	4
29	Waveoff	4+
31	Course Rules/HFE	4
23	OLF Operations	4+

Block #	Media	Title	Events	Hrs	H/X
C44	T-6A	Annual Out-of-Control Flight	1	1.6	1.6

1. Prerequisite. G0407 (OCF Stan Exam) – OCF Upgrade only.

2. Syllabus Notes

a. Fly this event from either cockpit.

b. This event is required annually to fulfill currency requirements.

3. Special Syllabus Requirements. None.

4. Discuss Items. Out-of-control flight/recovery procedures, controls neutral spin recovery, progressive spin, spin versus spiral, aft stick stall, defensive positioning, fuel system, and engine oil and propeller limitations in OCF training.

5. Block MIF

CTS REF	MANEUVER	C4401
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
12	Trim	4+
13	VFR Scan	4+
17	POS	4+
18	ATS	4+
19	Spin	4+
84	Controls Neutral Spin Recovery	4+
85	Progressive Spin	4+
86	OCF Recovery	4+

Block #	Media	Title	Events	Hrs	H/X
C45	T-6A	OCF Standardization Instructor Upgrade	1	1.6	1.6

1. Prerequisite. C4401 – OCF Upgrade only.

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items. Out-of-control flight/recovery procedures, progressive and controls neutral spin recovery, spin versus spiral, aft stick stall, common IUT errors, and defensive positioning.

5. Block MIF

CTS REF	MANEUVER	C4501
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
12	Trim	4+
13	VFR Scan	4+
17	POS	4+
18	ATS	4+
19	Spin	4+
84	Controls Neutral Spin Recovery	4+
85	Progressive Spin	4+
86	OCF Recovery	4+
88	Spiral	4+

Block #	Media	Title	Events	Hrs	H/X
C46	T-6A	OCF Standardization Instructor Check Flight	1	1.6	1.6

1. Prerequisite. C4501 – OCF Upgrade only.

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items. Out-of-control flight/recovery procedures, progressive and controls neutral spin recovery, spin versus spiral, aft stick stall, common IUT errors, and defensive positioning.

5. Block MIF

CTS REF	MANEUVER	C4690
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
12	Trim	4+
13	VFR Scan	4+
17	POS	4+
18	ATS	4+
19	Spin	4+
84	Controls Neutral Spin Recovery	4+
85	Progressive Spin	4+
86	OCF Recovery	4+
32	VFR Unusual Attitude Recovery	4+
88	Spiral	4+

Chapter V

Instrument Training

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

Simulator/Device Event
Check Flight Event

INSTRUMENT STAGE MANEUVER ITEM FILE				
CTS REF	**MANEUVER**	**I2102**	**I4102**	**I4290**
1	General Knowledge/Procedures	4+	4+	4+
2	Emergency Procedures	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+
4	Basic Air Work		4+	4+
5	Mission Planning		4+	4+
6	In-Flight Planning/Area Orientation		4+	4+
7	In-Flight Checks	4+	4+	4+
8	Radio Procedures	4+	4+	4+
9	Ground Operations	4+	4+	4+
11	Departure	4+	4+	4+
15	Basic Transitions		4+	4
47	Student Procedures	4+	4+	4+
45	Enroute Procedures	4+	4+	4+
46	Point-to-Point		4+	4
49	Arcing		4+	4
50	Climbs and Descents		4+	4
51	Radial Intercepts		4+	4

MIF continued on next page.

INSTRUMENT STAGE MANEUVER ITEM FILE				
CTS REF	**MANEUVER**	**I2102**	**I4102**	**I4290**
52	Station Passage		4+	4
62	RVFAC		4+	4
65	In-Flight Computations	4+	4+	4+
64	Use of ATIS/PMSV/FSS	4+	4+	4+
53	VOR Holding	4	4+	4
54	GPS Holding	4	4+	4
55	VOR Approach	4	4+	4
57	Localizer Approach	4	4+	4
58	ILS Approach	4	4+	4
56	GPS Approach	4	4+	4
60	PAR Approach	4	4+	4
66	ASR Approach	4	4+	4
48	CRM	4+	4+	4+
68	GPS Procedures	4+	4+	4+
63	Missed Approach	4+	4+	4+
	Special Syllabus Requirements		1	

Block #	Media	Title	Events	Hrs	Category
I11	Class	Instruments Ground Training	2	7.0	Instruments

1. Prerequisites

   a. Q4290 prior to I1101 - IUT only.

   b. I1101 prior to I1190 – IUT only.

2. Events

I1101	MIL	Instrument Stage Prep	6.0
I1190	P/P Exam	Instrument Standardization Exam	1.0

3. Syllabus Notes. I1190 is required annually to fulfill currency requirements.

4. Discuss Items. None.

Block #	Media	Title	Events	Hrs	H/X
I21	UTD/ OFT	Instruments	2	3.0	1.5

1. Prerequisites

   a. I1190 (Instrument Stan Exam).

   b. G0401 (FLIP/Flight Planning).

2. Syllabus Notes. None.

3. Special Syllabus Requirements. None.

4. Discuss Items

   I2101
   Airway navigation NFO responsibilities (briefs/altitude warning calls), leading turns, standard course corrections, turnpoint procedures, time estimates, ground speed checks, IMC emergencies, partial panel scan, ILS/LOC and GPS approach procedures, and unusual attitude recoveries.

   I2102
   Airway navigation NFO responsibilities (briefs/altitude warning calls), leading turns, standard course corrections, turnpoint procedures, time estimates, and ground speed checks. IUT will practice all student procedures.

5. Block MIF

CTS REF	MANEUVER	I2102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
11	Departure	4+
47	Student Procedures	4+
45	Enroute Procedures	4+
65	In-Flight Computations	4+
64	Use of ATIS/PMSV/FSS	4+
53	VOR Holding	4
54	GPS Holding	4
55	VOR Approach	4
57	Localizer Approach	4
58	ILS Approach	4
56	GPS Approach	4
60	PAR Approach	4
66	ASR Approach	4
48	CRM	4+
68	GPS Procedures	4+
63	Missed Approach	4+

Block #	Media	Title	Events	Hrs	H/X
I41	T-6A	Instruments	2	4.0	2.0

1. Prerequisite. I2102.

2. Syllabus Notes. None.

3. Special Syllabus Requirements

I4101
Standardization Instructor (SI) will perform student procedures, and IUT will practice instructional techniques from the front cockpit.

I4102
IUT will practice student procedures from the rear cockpit.

4. Discuss Items

I4101
Local GCA pattern, GPS procedures and approaches, stereo routes, holding, squadron SOP, grading criteria (primary/intermediate), OPNAVINST 3710.7U procedures/restrictions, airways navigation NFO responsibilities, turnpoint procedures, time estimates, airways navigation routes, and fuel packet.

I4102
Leading turns, standard course corrections, radar vectors to final, localizer approach, GPS procedures and approaches, civilian field considerations/FSS, Wx briefs/updates off-station, common student errors, back course localizer, student ATFs, and student considerations/responsibilities for outs/ins.

5. Block MIF

CTS REF	MANEUVER	I4102
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+

MIF continued on next page.

CTS REF	MANEUVER	I4102
4	Basic Air Work	4+
5	Mission Planning	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
11	Departure	4+
15	Basic Transitions	4+
47	Student Procedures	4+
45	Enroute Procedures	4+
46	Point-to-Point	4+
49	Arcing	4+
50	Climbs and Descents	4+
51	Radial Intercepts	4+
52	Station Passage	4+
62	RVFAC	4+
65	In-Flight Computations	4+
64	Use of ATIS/PMSV/FSS	4+
53	VOR Holding	4+
54	GPS Holding	4+
55	VOR Approach	4+
57	Localizer Approach	4+
58	ILS Approach	4+
56	GPS Approach	4+
60	PAR Approach	4+
66	ASR Approach	4+
48	CRM	4+
68	GPS Procedures	4+
63	Missed Approach	4+
	Special Syllabus Requirements	1

Block #	Media	Title	Events	Hrs	H/X
I42	T-6A	Instrument Check Flight	1	2.0	2.0

1. Prerequisites

a. I4102 - IUT only.

b. I1190 (Instrument Stan Exam) - Annual Check only.

2. Syllabus Notes

a. IUT briefs flight. SI will perform student procedures and introduce common student errors. IUT will practice instructional techniques from the front cockpit.

b. For annual Standardization Flights, the IP will practice as a student from the rear cockpit.

c. For the initial Instrument check flight, one RNAV approach, one type of holding, and one precision approach is required. For annual Standardization Flights, at a minimum, two different approaches and holding shall be performed.

d. This event is required annually to fulfill currency requirements.

3. Special Syllabus Requirements. None.

4. Discuss Items

I4290 (Initial Check)
Cross-country considerations, GPS usage, approach minimums, Wx alternate requirements of OPNAVINST 3710.7U, servicing (out/in, cross-country), and securing aircraft (military versus civilian fields).

I4290 (Annual Check)
Approach minimums, Wx alternate requirements of OPNAVINST 3710.7U, and securing aircraft (military versus civilian fields).

5. Block MIF

CTS REF	MANEUVER	I4290
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+
8	Radio Procedures	4+
9	Ground Operations	4+
11	Departure	4+
15	Basic Transitions	4
47	Student Procedures	4+
45	Enroute Procedures	4+
46	Point-to-Point	4
49	Arcing	4
50	Climbs and Descents	4
51	Radial Intercepts	4
52	Station Passage	4
62	RVFAC	4
65	In-Flight Computations	4+
64	Use of ATIS/PMSV/FSS	4+
53	VOR Holding	4
54	GPS Holding	4
55	VOR Approach	4
57	Localizer Approach	4
58	ILS Approach	4
56	GPS Approach	4
60	PAR Approach	4
66	ASR Approach	4

MIF continued on next page.

CTS REF	MANEUVER	I4290
48	CRM	4+
68	GPS Procedures	4+
63	Missed Approach	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

Device Event
Check Flight Event

NAVIGATION STAGE MANEUVER ITEM FILE				
CTS REF	**MANEUVER**	**N3101**	**N4103**	**N4290**
1	General Knowledge/Procedures	4+	4+	4+
2	Emergency Procedures	4+	4+	4+
3	Headwork/Situational Awareness	4+	4+	4+
4	Basic Air Work	4+	4+	4+
5	Mission Planning	4+	4+	4+
6	In-Flight Planning/Area Orientation	4+	4+	4+
7	In-Flight Checks	4+	4+	4+
8	Radio Procedures	4+	4+	4+
11	Departure	4+	4+	
13	VFR Scan	4+	4+	
40	VFR Arrival	4+	4+	4
41	VFR Pattern			4
43	VFR Course Maintenance	4+	4+	4+
47	Student Procedures	4+	4+	4+
69	Low-Level Route			4+

Block #	Media	Title	Events	Hrs	Category
N11	Class	Navigation Ground Training	4	8.0	Navigation

1. Prerequisites. N1101-3 (any order) prior to N1190 – Upgrade only.

2. Events

N1101	MIL	Chart Review/Prep	2.0
N1102	MIL	Low-Level Flight Planning	2.0
N1103	MIL	Flight Procedures	3.0
N1190	P/P Exam	Navigation Standardization Exam	1.0

3. Syllabus Notes

a. IUTs do not complete this block; events are Upgrade only.

b. N1190 is required annually to fulfill currency requirements.

4. Discuss Items. None.

Block #	Media	Title	Events	Hrs	H/X
N31	OFT	Navigation	1	1.5	1.5

1. Prerequisite. N1190 (Navigation Standardization Exam).

2. Syllabus Note. Upgrade event only.

3. Special Syllabus Requirements. None.

4. Discuss Items. Wind analysis, speed/course correction, low altitude engine failure, and ejection considerations.

5. Block MIF

CTS REF	MANEUVER	N3101
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+
8	Radio Procedures	4+
11	Departure	4+
13	VFR Scan	4+
40	VFR Arrival	4+
43	VFR Course Maintenance	4+
47	Student Procedures	4+

Block #	Media	Title	Events	Hrs	H/X
N41	T-6A	Navigation	3	4.8	1.6

1. Prerequisite. N3101.

2. Syllabus Note. Upgrade event only.

3. Special Syllabus Requirements. None.

4. Discuss Items

N4101
Visual navigation chart interpretation, VFR flight following, GPS procedures, wind analysis, speed/course correction, low altitude engine failure, and ejection considerations.

N4102
Wind analysis, speed/course correction, compound wind analysis, low-level route conflicts/overlaps, and hazards.

N4103
Any Navigation student brief items.

5. Block MIF

CTS REF	MANEUVER	N4103
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+
8	Radio Procedures	4+
11	Departure	4+
13	VFR Scan	4+
40	VFR Arrival	4+
43	VFR Course Maintenance	4+
47	Student Procedures	4+

Block #	Media	Title	Events	Hrs	H/X
N42	T-6A	Navigation Check Flight	1	1.6	1.6

1. Prerequisites

a. N4103 – Upgrade only.

b. N1190 (Navigation Standardization Exam) – Annual check.

2. Syllabus Notes

a. For initial check flight, IUT briefs flight. SI will perform student procedures and introduce common student errors. IUT will practice instructional techniques from the front cockpit.

b. This event is required annually to fulfill currency requirements.

c. For annual Standardization Flights, the pilot being evaluated will practice as a student from the rear cockpit.

3. Special Syllabus Requirements. None.

4. Discuss Items. Course Training Standards, intermediate checkpoint selection, GPS procedures, spacing between route entries, and weather minimums.

5. Block MIF

CTS REF	MANEUVER	N4290
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+
8	Radio Procedures	4+
40	VFR Arrival	4
41	VFR Pattern	4
43	VFR Course Maintenance	4+
47	Student Procedures	4+
69	Low-Level Route	4+

Chapter VII

Formation Training

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

Check Flight Event

FORMATION STAGE MANEUVER ITEM FILE					
CTS REF	**MANEUVER**	**F4101**	**F4204**	**F4305**	**F4490**
1	General Knowledge/Procedures	3	4+	4+	4+
2	Emergency Procedures	3	4+	4+	4+
3	Headwork/Situational Awareness	3	4+	4+	4+
4	Basic Air Work	3	4+	4+	4+
6	In-Flight Planning/Area Orientation	3	4+	4+	4+
7	In-Flight Checks	3	4+	4+	4+
8	Radio Procedures	3	4+	4+	4+
9	Ground Operations	3	4+	4+	4+
10	Takeoff	3	4+	4+	4+
11	Departure	3	4+	4+	4+
12	Trim	3	4+	4+	4+
13	VFR Scan	3	4+	4+	4+
69	Low-Level Route			4+	4
70	Formation Briefing	3	4+	4+	4+
71	Visual Signals	3	4+	4+	4+
72	Breakup and Rendezvous	3	4+	4+	4+
73	Section Approach	3	4+	4+	4
74	Running Rendezvous	3	4+	4+	4

MIF continued on next page.

FORMATION STAGE MANEUVER ITEM FILE					
CTS REF	**MANEUVER**	**F4101**	**F4204**	**F4305**	**F4490**
75	Section Takeoff	3	4+	4+	4
76	Parade Turns	3	4+	4+	4+
77	Crossunder	3	4+	4+	4+
78	Underrun	3	4+	4+	4
79	Parade	3	4+	4+	4+
80	Lost Wingman		4+	4	4
81	Lead Change	3	4+	4	4+
82	Tactical/Extended Formation/ Maneuvering	3	3	4+	4+
	Special Syllabus Requirements	1	1		

Block #	Media	Title	Events	Hrs	Category
F11	Class	Formation Ground Training	2	3.0	Formation

1. Prerequisite. F1101 prior to F1190 – Upgrade only.

2. Events

F1101	MIL	Formation Preparation and Flight Procedures	2.0
F1190	P/P Exam	Formation Standardization Exam	1.0

3. Syllabus Notes

a. IUTs do not complete this block; events are Upgrade only.

b. F1190 is required annually to fulfill currency requirements.

4. Discuss Items. None.

Block #	Media	Title	Events	Hrs	H/X
F41	T-6A	Formation Exposure	1	2.0	2.0

1. Prerequisite. Q4290.

2. Syllabus Notes. None.

3. Special Syllabus Requirements. Airborne gear inspection, section takeoff, and section approach.

4. Discuss Items. Hand signals, flight profile, section ground procedures, formation checkpoints, section engine failure/PELs, loss of visual contact/inadvertent IFR, airborne damage, gear inspection, dissimilar formation flight, and section takeoff.

5. Block MIF

CTS REF	MANEUVER	F4101
1	General Knowledge/Procedures	3
2	Emergency Procedures	3
3	Headwork/Situational Awareness	3
4	Basic Air Work	3
6	In-Flight Planning/Area Orientation	3
7	In-Flight Checks	3
8	Radio Procedures	3
9	Ground Operations	3
10	Takeoff	3
11	Departure	3
12	Trim	3
13	VFR Scan	3
70	Formation Briefing	3
71	Visual Signals	3
72	Breakup and Rendezvous	3
73	Section Approach	3
74	Running Rendezvous	3
75	Section Takeoff	3
76	Parade Turns	3
77	Crossunder	3
78	Underrun	3
79	Parade	3
81	Lead Change	3
82	Tactical/Extended Formation/ Maneuvering	3
	Special Syllabus Requirements	1

Block #	Media	Title	Events	Hrs	H/X
F42	T-6A	Formation	4	6.4	1.6

1. Prerequisite. F1190 (Formation Standardization Exam).

2. Syllabus Note. None.

3. Special Syllabus Requirements

   F4201
   Wingman consideration and SOP formation limitations.

4. Discuss Items

   F4201
   Emergency field locations in operating area, visual signals, section approach procedures, and overhead and VFR field entry procedures.

   F4202
   Aborted takeoff procedures for lead and wingman.

   F4203
   Responsibilities of the section leader and visual landing gear inspection.

   F4204
   Section approach separation if lost sight.

5. Block MIF

CTS REF	MANEUVER	F4204
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
70	Formation Briefing	4+
71	Visual Signals	4+
72	Breakup and Rendezvous	4+
73	Section Approach	4+
74	Running Rendezvous	4+
75	Section Takeoff	4+
76	Parade Turns	4+
77	Crossunder	4+
78	Underrun	4+
79	Parade	4+
80	Lost Wingman	4+
81	Lead Change	4+
82	Tactical/Extended Formation/ Maneuvering	3
	Special Syllabus Requirements	1

Block #	Media	Title	Events	Hrs	H/X
F43	T-6A	Formation	5	8.0	1.6

1. Prerequisite. F4204.

2. Syllabus Note. None.

3. Special Syllabus Requirements. None.

4. Discuss Items

F4301
FTI parade sequence, tail chase/cruise maneuvering, and tactical maneuvering.

F4302
Common student errors.

F4303
Formation low-level and VR route procedures.

F4304
Any FTI procedure or maneuver.

5. Block MIF

CTS REF	MANEUVER	F4305
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
69	Low-Level Route	4+
70	Formation Briefing	4+
71	Visual Signals	4+
72	Breakup and Rendezvous	4+
73	Section Approach	4+
74	Running Rendezvous	4+
75	Section Takeoff	4+
76	Parade Turns	4+
77	Crossunder	4+
78	Underrun	4+
79	Parade	4+
80	Lost Wingman	4
81	Lead Change	4
82	Tactical/Extended Formation/ Maneuvering	4+

Block #	Media	Title	Events	Hrs	H/X
F44	T-6A	Formation Check Flight	1	1.6	1.6

1. Prerequisites

a. F4305 – Initial Check only.

b. F1190 (Formation Standardization Exam) – Annual Check only.

2. Syllabus Notes

a. Formation Upgrade/Annual Check only.

b. Event is required annually to fulfill currency requirements.

3. Special Syllabus Requirements. None.

4. Discuss Items. HEFOE procedures, lost communication procedures, loss of visual contact with flight, simulated power loss for lead and wingman, and inadvertent IMC.

5. Block MIF

CTS REF	MANEUVER	F4490
1	General Knowledge/Procedures	4+
2	Emergency Procedures	4+
3	Headwork/Situational Awareness	4+
4	Basic Air Work	4+
6	In-Flight Planning/Area Orientation	4+
7	In-Flight Checks	4+
8	Radio Procedures	4+
9	Ground Operations	4+
10	Takeoff	4+
11	Departure	4+
12	Trim	4+
13	VFR Scan	4+
69	Low-Level Route	4
70	Formation Briefing	4+
71	Visual Signals	4+
72	Breakup and Rendezvous	4+
73	Section Approach	4
74	Running Rendezvous	4
75	Section Takeoff	4
76	Parade Turns	4+
77	Crossunder	4+
78	Underrun	4
79	Parade	4+
80	Lost Wingman	4
81	Lead Change	4+
82	Tactical/Extended Formation/ Maneuvering	4+

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Chapter VIII

Tactical Training

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

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Chapter IX

Course Training Standards

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 Proficiency 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 MIF regulates IUT progression to meet required standards prior to phase completion. Standardization instructor pilots shall evaluate student performance against these standards.

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

BEHAVIOR STATEMENT	STANDARDS
Graded Item	
• A brief description of the behavior, required action, and/or conditions.	• The specific standards for the action. May be read as "The 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 CTSs 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	STANDARDS
1. General Knowledge/Procedures	
• Maintain working knowledge of all appropriate flight training instructions and directives.	• Recites, discusses, and/or performs all applicable items essential to the operation of the airplane.
2. Emergency Procedures	
• Maintain in-depth knowledge of NATOPS and appropriate directives.	• Correctly analyzes situation. • Performs/recites critical action steps from memory. • Uses checklist when conditions permit. • Completes procedures in a timely manner.

BEHAVIOR STATEMENT	STANDARDS
3. Headwork/Situational Awareness	
• Comply with the FTI and NATOPS while maintaining situational awareness sufficient for flight safety.	• Understands instructions, demonstrations, and explanations. • Foresees and avoids possible difficulties. • Remains alert and spatially oriented.
4. Basic Air Work	
• Establish and maintain desired altitude, airspeed, and heading during flight.	• Maintains aircraft within 100 feet, 5 KIAS, 10° of heading. • Appropriately uses power, attitude and trim. • Levels off within 100 feet of desired altitude. • ±10 seconds of correct time as applicable.
5. Mission Planning	
• Perform mission planning to include takeoff, climb, enroute, descent, approach, and landing data. • Plan alternate course of action. • Flight log/DD 175 preparation.	• 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	
• Plan and execute a sequence of maneuvers or actions. • Understand current and required position.	• Efficiently sequences maneuvers. • Adjusts mission profile for external factors (weather, traffic, etc.). • Maintains positional awareness using ground references, navigational aids, VFR charts, or FLIP publications.

BEHAVIOR STATEMENT	STANDARDS
7. In-Flight Checks	
• Complete checks as required.	• Performs: ► Operations checks at least every 15 minutes. ► Climb, Descent, and Landing checklist when appropriate. ► Prestalling, Spinning, and Aerobatic checklist when required.
8. Radio Procedures	
• Use UHF/VHF radio.	• Makes all calls when required. • Responds when addressed. • Uses correct terminology. • Does not step on others' transmissions.

CONTACT

BEHAVIOR STATEMENT	STANDARDS
9. Ground Operations	
• Prepare aircraft for flight. • Move aircraft from parking area to runway.	• Correctly and expeditiously performs before exterior inspection, exterior inspection, interior inspection, engine start, before taxi, taxi, overspeed governor, before takeoff, after landing, engine shutdown, and before leaving aircraft checks. • Taxies safely via prescribed routing within 3 feet of centerline and at a safe speed.
10. Takeoff	
• Perform takeoff, starting with clearance for takeoff and ending with landing gear retraction.	• Executes lineup checklist. • Checks instruments at military power. • Applies appropriate crosswind controls. • Maintains runway centerline within 10 feet. • Rotates to proper takeoff attitude at NATOPS rotation speed. • Transitions to crosscheck scan.

BEHAVIOR STATEMENT	STANDARDS
11. Departure	
• Perform VFR, IFR, or simulated IFR departure.	• Complies with departure procedures, controller instructions.
12. Trim	
• Properly trim the aircraft as required by changes in airspeed, power, or configuration.	• Trims in the correct sequence: rudder, elevator, aileron.
13. VFR Scan	
• Maintain aircraft control relying primarily on outside references. • Clear for other aircraft and weather.	• Visually detects traffic and weather conflicts.
14. Level Speed Change	
• Perform a level speed change per the FTI.	• Maintains BAW IAW FTI procedures.
15. Basic Transitions	
• Perform basic transitions as per the FTI.	• Performs basic transitions as per FTI while maintaining BAW.
16. Turn Pattern	
• Perform a turn pattern per the FTI.	• Commences on cardinal heading. • Maintains BAW. • Holds bank angle ±5°. • Rolls out ±5° of reversal heading.
17. Power-Off Stall	
• Perform a power-off stall and recover per the FTI.	• Commences in the clean configuration. • Performs clearing turn. • Trims aircraft for 125 ±5 KIAS glide. • Initiates recovery at stall entry during Q41XX block and at first indication of stall during C41XX block of training. • Recovers without secondary stall no lower than 6000 feet AGL.

BEHAVIOR STATEMENT	STANDARDS
18. Approach Turn Stall	
• Perform an approach turn stall and recover per the FTI.	• Commences in the full-flap landing configuration. • Performs clearing turn. • Enters stall at/above 8000 AGL. • Initiates recovery at stall entry during Q41XX block and at first indication of stall during C41XX block of training. • Loses less than 300 feet during recovery. • Recovers without secondary stall no lower than 6000 feet AGL.
19. Spin	
• Spin and recover per FTI.	• Performs clearing turn. • Enters spin at/above 16,000 MSL: ▶ PCL idle. ▶ Pitch 20-30°. ▶ AOB less than 5°. • Performs OCF scan and verbalizes indications IAW NATOPS and the Contact FTI. • Initiates recovery on confirmation of spin indications. • Recovers from dive without exceeding 5 G while remaining in the assigned airspace or entering secondary stall.
20. Simulated Power Loss (High)	
• Intercept the ELP at or inside of high key following a simulated engine failure above 3000 AGL.	• Maintains airspeed within 5 KIAS of that directed by NATOPS Engine Failure and Forced Landing Procedures. • Selects suitable landing runway. • Flies correct checkpoints on the ELP. • Demonstrates the ability to effect a safe landing at the intended point of touchdown with sufficient runway remaining.

BEHAVIOR STATEMENT	STANDARDS
21. Simulated Power Loss (Low)	
• Intercept the ELP at or inside of high key following a simulated engine failure between 800 feet AGL and 3000 AGL.	• Maintains airspeed within 5 KIAS of that directed by NATOPS Engine Failure and Forced Landing Procedures. • Selects suitable landing runway. • Flies correct checkpoints on the ELP. • Demonstrates the ability to effect a safe landing at the intended point of touchdown with sufficient runway remaining.
22. Precautionary Emergency Landing	
• In response to simulated EP, proceed to high key for the nearest runway, then intercept the ELP.	• Selects nearest suitable runway and appropriate high key. • Demonstrates the ability to effect a safe landing at the intended point of touchdown with sufficient runway remaining.
23. OLF Operations	
• Perform a VFR entry into the traffic pattern. • Perform a break turn to downwind. • Depart pattern per FTI and FWOP.	• 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.

BEHAVIOR STATEMENT	STANDARDS
24. Landing Pattern	
• If from initial, from rolling out on downwind to the straightaway. • If from takeoff, touch-and-go, or waveoff: commencing the crosswind turn to the straightaway.	• Flies 120 ±5 KIAS on downwind. • Complies with BAW parameters except: ► LDG Flaps ▪ 110 ±5 KIAS from 180 until straightaway. ▪ 100 ±5 KIAS on final. ► TO Flaps ▪ 115 ±5 KIAS from 180 until straightaway. ▪ 105 ±5 KIAS on final. ► No-Flap ▪ 120 ±5 KIAS from 180 until straightaway. ▪ 110 ±5 KIAS on final. ► Rollout on final: ▪ Within 75 feet of runway centerline. ▪ With 1200-1500 feet of straightaway. ▪ Between 100-150 feet AGL.
25. Angle of Attack Approach No Flap/Full Flap/TO Flap	
• Perform AOA approach to a normal flared landing.	• Transitions to AOA approaching the upwind numbers. • Maintains AOA ±1 unit. • Rolls out on final: ► 1200-1500 feet of straightaway. ► 100-150 feet AGL. ► Within 75 feet of runway centerline. • Executes normal flared landing.

BEHAVIOR STATEMENT	STANDARDS
26. Landing Flap Landing	
• Execute normal landing per the FTI. • From crossing runway threshold until: ▶ Touch-and-go - commencing crosswind turn. ▶ Full stop - aircraft at taxi speed.	• Maintains correct glidepath until flare initiation. • Touches down with: ▶ 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.
27. TO Flap Landing	
• Execute normal landing per the FTI. • From crossing runway threshold until: ▶ Touch-and-go - commencing crosswind turn. ▶ Full stop - aircraft at taxi speed.	• Maintains correct glidepath until flare initiation. • Touches down with: ▶ 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.
28. No Flap Landing	
• Execute normal landing per the FTI. • From crossing runway threshold until: ▶ Touch-and-go - commencing crosswind turn. ▶ Full stop - aircraft at taxi speed.	• Maintains correct glidepath until flare initiation. • Touches down with: ▶ 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
29. Waveoff/Go-Around	
• Discontinue approach to landing.	• Expeditiously executes waveoff procedures. • Initiates waveoff when: ► Conflicting with PEL traffic. ► Stall warning system actuates (stick shaker). ► Aircraft requires more than 45° AOB to avoid overshooting final. ► Directed. ► Aircraft is not in a position to make a safe landing.
30. PEL (P)	
• Procedures comply with the NATOPS Manual and the Contact FTI.	• Executes timely procedural execution. • Selects nearest suitable runway. • Once established on the ELP profile, uses power rather than delaying configuration change to maintain ELP profile if energy state becomes low. • If conditions permit, lowers flaps at low key. • Establishes aircraft on final in position to make a safe landing.
31. Course Rules/Home Field Entry (HFE)	
• Return to home field using local course rules.	• Complies with the FTI, local course rules, and FWOP as applicable. • Proceeds under own navigation to HFE point.
32. VFR Unusual Attitude Recovery	
• Recover from the unusual attitude.	• Recovers with minimal loss of altitude or excessive airspeed. • Does not overstress or stall aircraft. • Does not enter OCF.
33. Aileron Roll	
• Perform an aileron roll per the FTI.	• Maintains minimum yaw during roll. • Completes roll with less than 5° AOB.

BEHAVIOR STATEMENT	STANDARDS
34. Loop	
• Perform a loop per the FTI.	• Initiates using 3-4 Gs. • Completes within: ▶ 200 feet of entry altitude. ▶ ±10° of entry heading.
35. Wingover	
• Perform a wingover per the FTI.	• Does not exceed: ▶ 2 Gs. ▶ 90° AOB. • Arrives at 90° position: ▶ 80-90° AOB. ▶ 85-95° from entry heading. • Arrives at level flight position within: ▶ 100 feet of entry altitude. ▶ 10° of reciprocal heading.
36. Barrel Roll	
• Perform a barrel roll per the FTI.	• Does not exceed 2 Gs. • Arrives at 45° position: ▶ 80-100° AOB. ▶ 55-60° nose-high. • Arrives at 90° position: ▶ Nose 10-20° above the horizon. ▶ 170-190° AOB. ▶ 80-90° of entry heading. • Completes within: ▶ 200 feet of entry altitude. ▶ 10° of entry heading.
37. One-Half Cuban Eight	
• Perform one-half Cuban eight per the FTI.	• Initiates using 3-4 Gs. • Completes within: ▶ 200 feet of entry altitude. ▶ 20° of reciprocal heading.
38. Split-S	
• Perform a split-S per the FTI.	• Initiates at: ▶ 120-140 KIAS. ▶ 10-20° nose-high. • Recovers within: ▶ 1300-1700 feet below entry altitude. ▶ 10° of reciprocal heading.

BEHAVIOR STATEMENT	STANDARDS
39. Immelmann	
• Perform Immelmann per the FTI.	• Initiates using 3-4 Gs. • Completes within: ► 10° of reciprocal heading. ► 2000-3000 feet above entry altitude. • Maintains aircraft control.
40. VFR Arrival	
• Plan and perform arrival and entry into a controlled or uncontrolled field.	• Safely executes a VFR arrival and pattern entry IAW FTI and appropriate directives.
41. VFR Pattern	
• Use FAA standard pattern procedures to establish aircraft on final.	• Uses CTAF or pattern direction indicators to establish pattern direction. • Maintains FAA standard pattern parameters in accordance with the current AIM.
42. VFR Straight-In	
• Perform approach IAW FTI.	• Aligns with runway on normal 3° glideslope. • Complies with BAW parameters except: ► LDG flaps: ▪ 100 ±5 KIAS from interception of visual glideslope until beginning landing flare. ► TO flaps: ▪ 105 ±5 KIAS from interception of visual glideslope until beginning landing flare. ► No flap: ▪ 110 ±5 KIAS from interception of visual glideslope until beginning landing flare. ► On final: ▪ Within 75 feet of runway centerline.

BEHAVIOR STATEMENT	STANDARDS
43. VFR Course Maintenance	
• Navigate from point-to-point using dead reckoning and visual references.	• Establishes chart position using clock-chart-ground. • Identifies chart significant landmarks along route. • Maintains airspeed to achieve planned leg time ±1 minute, winds permitting.

INSTRUMENTS

BEHAVIOR STATEMENT	STANDARDS
44. Unusual Attitude (IMC)	
• Perform unusual attitude recovery using full panel references.	• Nose low: Recovers minimizing altitude loss and airspeed buildup. • Nose-high: ► Does not stall aircraft. ► Does not overstress aircraft. ► Does not enter subsequent unusual attitude.
45. Enroute Procedures	
• Maintain aircraft's track on appropriate radial or airway. • Identify an intersection using appropriate NAVAID(s).	• Maintains ±3 radials of centerline. • Determines approximate wind direction and proper crosswind correction. • Positions the aircraft at a required intersection or leads the turn at an intersection to roll out on the required radial ±3°.
46. Point-to-Point	
• Proceed direct to an assigned fix using VOR/DME point-to-point per FTI.	• Applies FTI procedures to expeditiously establish a correct initial heading. • Continuously updates heading to: ► Avoid sudden, large, heading changes. ► Arrive within 1 mile.

BEHAVIOR STATEMENT	STANDARDS
47. Student Procedures	
• To include, but not limited to, briefs, altitude calls, and turnpoint procedures.	• Performs student procedures as per appropriate stage FTI.
48. CRM	
• Demonstrate and use CRM skills.	• Demonstrates knowledge of CRM critical skills (DAM CLAS) and ability to apply during flight.
49. Arcing	
• Perform per FTI: VOR/DME arc-to-radial intercepts and radial-to-arc intercepts.	• Maintains the arc ±0.5 DME. • Calculates lead points to join: ▶ Arc ±0.5 DME. ▶ Radial ±3°.
50. Climbs and Descents	
• Perform climbs and descents per FTI or ATC direction.	• Maintains airspeed as appropriate for airspace.
51. Radial Intercepts	
• Perform radial intercepts per FTI or ATC direction.	• Establishes aircraft ±3° of desired radial.
52. Station Passage	
• Identify station passage per FTI.	• Identifies station passage for the NAVAID in use.
53. Holding (VOR)	
• Perform VOR holding per FTI.	• Computes proper entry turn. • Estimates wind direction and applies appropriate corrections. • Establishes and maintains aircraft within holding airspace.
54. Holding (GPS)	
• Perform GPS holding per FTI.	• Properly sets GPS for holding IAW FTI. • Computes proper entry turn. • Estimates wind direction and applies appropriate corrections. • Establishes and maintains aircraft within holding airspace.

BEHAVIOR STATEMENT	STANDARDS
55. VOR Approach	
• Perform the approach per FTI.	• IAF to FAF: ▶ Maintains course ±5° or valid intercept. • By the FAF or initiating descent to MDA: ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. • Final: ▶ Maintains 3° of desired course. ▶ Reaches and maintains MDA. ▶+100/-0 feet. • Is in position to make safe landing at MDA.
56. GPS Approach	
• Perform the approach per FTI.	• Properly sets GPS IAW FTI. • IAF to FAF: ▶ Maintains course ±5° or valid intercept. • By the FAF or initiating descent to MDA: ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. • Final: ▶ Maintains 3° of desired course. ▶ Reaches and maintains MDA. ▶ +100/-0 feet. • Is in position to make safe landing at MDA.
57. Localizer Approach	
• Perform the approach per FTI.	• By the FAF: ▶ Completes landing checklist. ▶ Has aircraft trimmed and at final approach airspeed. • Final: ▶ Maintains ±1 dot on localizer. ▶ Reaches and maintains MDA. ▶ +100/-0 feet.

BEHAVIOR STATEMENT	STANDARDS
58. ILS Approach	
• Perform the approach per FTI.	• On initiating descent to DH: ► Completes landing checklist. ► Has aircraft trimmed and at final approach airspeed. • Final: ► Maintains ±1 dot on localizer. ► Maintains ±1 dot on glideslope. ► Executes Missed Approach or landing at DH.
59. Circling Approach	
• Perform a circling maneuver to the landing runway per the FTI and NIFM.	• Properly orients circling instructions to the landing runway. • Maintains at/above MDA consistent with weather. • Remains within the clear zone for the approach category.
60. Precision Approach Radar Approach	
• Perform final approach from descent point to DH using PAR for guidance.	• Responds quickly and correctly to controller instructions. • Before starting descent to DH: ► Completes landing checklist. ► Has aircraft trimmed and at final approach airspeed. • Maintains: ► Airspeed 120 ±5 KIAS on final. ► Heading ±3°. • Is in position to make safe landing at DH.

BEHAVIOR STATEMENT	STANDARDS
61. No Gyro GCA Approach	
• Perform final approach from descent point to DH/MDA using PAR or ASR for guidance, but without directional gyro (simulated).	• Responds quickly and correctly to controller instructions. • Before starting descent to DH/MDA: ► Completes landing checklist. ► Has aircraft trimmed and at final approach airspeed. • Turns: ► Uses standard rate prior to final. ► Uses one-half standard rate on final. • Maintains airspeed 120 ±5 KIAS on final. • Is in position to make safe landing at decision height/minimum descent altitude.
62. Radar Vectors to Final Approach Course	
• Perform an approach using radar vectors to final approach course per FTI.	• Responds quickly and correctly to controller instructions. • Maintains headings ±5°.
63. Missed Approach	
• Perform a missed approach.	• Complies with FTI and NIFM procedures. • Initiates when field not in sight and ► Nonprecision: ▪ Inside FAF and full scale CDI deflection. ▪ At specified MAP DME. ▪ At expiration of timing in the absence of DME. ► Precision, first of: ▪ Decision height. ▪ Controller directed. ► Or, not in position for safe landing.

BEHAVIOR STATEMENT	STANDARDS
64. Use of ATIS/PMSV/FSS	
• Use ATIS/PMSV to update destination conditions. • Use FSS as required to open, change, and close flight plans.	• Checks ATIS prior to contacting destination approach control. • Updates destination and alternate weather with PMSV/AWOS/FSS enroute, when required. • Contacts FSS to: ▶ Open flight plans after departure. ▶ Change flight plans enroute. ▶ Close flight plans after landing.
65. In-Flight Computations	
• Periodically compute: ▶ Ground speed. ▶ ETE. ▶ Fuel at destination.	• Computes: ▶ Ground speed ±6 knots. ▶ ETA ±30 seconds. ▶ Fuel ±50 pounds.
66. Airport Surveillance Radar (ASR) Approach	
• Perform final approach from descent point to MAP using ASR for guidance.	• Responds quickly and correctly to controller instructions. • Maintains: ▶ Airspeed 120 ±5 KIAS on final. ▶ Heading ±3°. • Is in position to make safe landing at MAP.
67. VFR Flight Following	
• Use of ATC flight following per FAA procedures.	• Opens/closes flight following with ATC.
68. GPS Procedures	
• Use GPS per NATOPS.	• Operates GPS for enroute and terminal area IAW NATOPS.
69. Low-Level Route	
• Fly low-level route.	• Maintains appropriate altitude ±100 feet IAW route requirements. • Correctly identifies turn points, checkpoints, and target. • Utilizes proper entry/exit and route maintenance procedures.

FORMATION

BEHAVIOR STATEMENT	STANDARDS
70. Formation Briefing	
• Perform formation briefing.	• Conducts formation briefing IAW formation FTI.
71. Visual Signals	
• Communicate using hand, head, and aircraft movements.	• Performs IAW FTI.
72. Breakup and Rendezvous	
• Separate flight and return to parade formation.	• Performs IAW FTI. • Lead monitors dash 2's position.
73. Section Approach	
• Execute an instrument or visual straight-in approach as lead or dash 2.	• Lead: ▶ Maintains contact or instrument approach parameters and procedures. ▶ Uses dash 2 consideration. • Dash 2 maintains parade parameters.
74. Running Rendezvous	
• Perform takeoff as dash 2 from takeoff clearance until in parade position.	• Performs IAW FTI. • Dash 2 accomplishes timely running rendezvous.
75. Section Takeoff	
• Perform takeoff from takeoff clearance through landing gear retraction while in parade formation.	• Performs IAW FTI. • Wingman maintains takeoff position until gear retraction, and then expeditiously moves to parade.
76. Parade Turns	
• Dash 2 is on the inside/outside of the turn while in parade.	• Maintains parade position.
77. Crossunder	
• Dash 2 moves from parade on one side of the formation to parade on the other side.	• Performs IAW appropriate FTI.

BEHAVIOR STATEMENT	STANDARDS
78. Underrun	
• Wingman discontinues rejoin due to excessive overtake or angles.	• Recognizes requirement for underrun in time to safely execute procedures IAW the appropriate FTI.
79. Parade	
• Parade formation position.	• Maintains parade parameters IAW FTI. • Smooth flight control and PCL corrections.
80. Lost Wingman	
• Wingman loses sight of lead.	• Safely executes procedures IAW the FTI.
81. Lead Change	
• Transfer control of the formation from lead to dash 2.	• Performs expeditiously IAW the FTI.
82. Tactical/Extended Formation/Maneuvering	
• Wingman maintains position on lead.	Wingman: • Maintains position using energy maneuverability concepts. • Fixes position IAW FTI. • Deconflicts lead's flight path. • Flies appropriate geometry IAW FTI. Lead: • Provides predictable platform for wingman.

OCF

BEHAVIOR STATEMENT	STANDARDS
83. Control Release Spin	
• Perform control release spin IAW OCF FTI.	• Selects altitude IAW NATOPS that allows dive recovery within the assigned airspace. • Ensures aircraft is in a steady state spin before releasing the controls. • Performs recovery procedures IAW NATOPS.
84. Controls Neutral Spin Recovery	
• Spin and recover per the FTI and NATOPS flight manual.	• Performs clearing turn. • Enters spin at/above 16,000 MSL: ► PCL idle. ► Pitch 20-30°. ► AOB less than 5°. • Performs OCF scan and verbalizes indications IAW NATOPS and the Contact FTI. • Initiates recovery on confirmation of spin indications using neutral control inputs. • Recovers from dive without exceeding 5 G while remaining in the assigned airspace or entering secondary stall.
85. Progressive Spin	
• Perform progressive spin IAW NATOPS.	• Selects altitude IAW NATOPS that allows dive recovery within the assigned airspace. • Ensures aircraft is in steady state spin before reversing the rudder direction. • Performs recovery procedures IAW NATOPS.
86. Out-of-Control Flight Recovery	
• Recognize OCF situation and promptly execute recovery procedures.	• Executes OCF recovery procedures IAW NATOPS and FTI. • Verbalizes OCF scan in correct sequence. • Does not overstress the aircraft. • Recovers within assigned airspace not lower than 10,000 feet MSL.

BEHAVIOR STATEMENT	STANDARDS
87. Inverted Flight	
• Establish the aircraft at recommended entry airspeed of 180-200 KIAS in the clean configuration.	• Performs inverted flight IAW FTI. • Does not exceed 15 seconds inverted. • Maintains altitude ±300 feet. • Maintains heading ±15°.
88. Spiral	
• Enter and recover from spiral per FTI.	• Performs clearing turn. • Enters high-speed spiral at/above 17,000 and below 22,000 MSL. • Maintains PCL idle. • Performs OCF scan IAW NATOPS. • Initiates recovery on confirming spiral indications and prior to reaching 150 knots. • Recovers from dive without exceeding 5 Gs or entering secondary stall and remaining within assigned airspace not lower than 10,000 MSL.