

# T-1A/T-39 INSTRUCTOR UNDER TRAINING (IUT) SYLLABUS

Welcome to the CTW-6 Flight Instructor Training Unit (FITU). This syllabus is designed to facilitate timely completion of your training. Dedicated IUTs must finish the training program in three months. Associate IUT's may take a little longer. It requires initiative on your part to stay on top of the required training and classes. Some flexibility in scheduling is available to accommodate personal needs, however, to meet time to train standards, these needs will be kept to a minimum. Your FITU Coordinator will create a Flight Instruction Standardized Training (FIST) Jacket. It is your responsibility to inform the FITU office upon completion of events so they may be documented in your FIST jacket. Future scheduling is based on this information so timely and accurate updates are critical to your success in this program. Any questions should be directed to your FITU coordinator:

Primary: IUT Coordinator Office Phone: 452-2305  
 Alt: Assistant IUT Coordinator Office Phone: 452-2305

This package contains information on how/where to complete ground events, and what you will need to bring with you. It is your responsibility to make sure these events are scheduled and completed. It also contains useful information about your flights, and provides a rough timeline of the flow of events.

**Associate Instructors:** If you are not going to be assigned as a staff instructor, you must submit a request to fly with the squadron from your present command through CTW-6. A copy of the approval letter **must** be on file at this squadron's training office prior to your first flight. It is your responsibility to make sure the letter is there.

## GROUND TRAINING EVENTS

1. **ADMIN CHECK-IN / NATOPS.** Bring your NATOPS jackets, medical records, and service record to the T-1A/T-39 IUT desk in the FITU. Air Force IUT's do not have a NATOPS jacket, therefore one will be created for you. Check with the POC to determine a good time to meet with your IUT coordinator. Make sure you leave your home telephone number with the student stash before you leave the IUT desk.

<u>BLDG</u>	<u>ORG</u>	<u>ROOM</u>	<u>POC</u>	<u>PHONE</u>
1854	Wing	C-231B	IUT Officer	2-2305

2. **ADMIN UP CHIT.** You must get an admin up-chit from a flight surgeon. This may be accomplished at the TRAWING 6 flight surgeon's office. The posted hours are 0730-0800 Mon-Fri (although, don't be surprised if they just don't show up some days, they're doctors after all). **You must have your medical records with you.** Ensure you retain one copy of the up chit. The other copies go in your NATOPS jacket. (*Alternate option:* You may also get an up chit at Branch Medical, see information below, their posted hours are 0700-0730 Mon-Fri.)

	<u>BLDG</u>	<u>ORG</u>	<u>ROOM</u>	<u>POC</u>	<u>PHONE</u>
TW-6	1854	Wing	C-223	CTW 6 Flight Surgeon	2-3540
Alternate	3600	Clinic	Up-Chit Clinic	Any Flt. Surg.	2-5242 x 106

3. **HIGH RISK SCREENING.** This document verifies your knowledge of the risk involved with training Student Flight Officers. When you see the flight surgeon for the up chit, have him fill out the top part of the High Risk Screening form. You will also need to see your **squadron safety officer and squadron XO or CO** in that order. Bring your service records to both of these interviews. Upon completion, ensure this form gets filed in your NATOPS jacket. You will not be designated an instructor until it is complete.

	<u>BLDG</u>	<u>ORG</u>	<u>ROOM</u>	<u>POC</u>	<u>PHONE</u>
VT-4	1853	Squadron	S-213	Safety Officer	2-3726
VT-4	1853	Squadron	C-222	XO	2-2105
VT-10	1853	Squadron	C229A	Safety Officer	2-4294
VT-10	1853	Squadron	S-204	XO	2-2566

4. **FLIGHT PHYSIOLOGY.** If your current physiological training is more than two years old, you will be scheduled to attend physiology training to update your expiration date. T-1A/T-39 aircraft require RP-2 training. Upon completion of training, ensure it is documented via a stamp in your NATOPS jacket. This is a half-day

event, normally starting Monday morning @ 0700. In addition, should you care to qualify yourself for T-34/T-2 hops, you must also complete RP-1 physiology training.

**5. SWIM QUALIFICATIONS.** If your current swim qualification is more than two years old, you will be scheduled to attend the swim course to update your expiration date. Navy personnel flying the T-1A/T-39 aircraft require R-2 training. Air Force personnel flying the T-1A/T-39 require N-5 training. Upon completion of training, ensure it is documented via a stamp in your NATOPS jacket. This is a two-day event, normally starting on Monday afternoon and ending Tuesday. In addition, should you care to qualify yourself for T-34/T-2 hops, you must also complete an R-1 swim qualification.

**6. G-TIP.** All instructors are required to receive training as part of the G-Training Improvement Program (G-TIP). It is administered by the CTW-6 flight physiologist. The training takes place whenever enough IUTs are available to justify a class. It is usually conducted in the Wing Conference Room or the Perch. This is a short and simple brief on G-Induced Loss of Consciousness (G-LOC). Bring your NATOPS jacket and ensure the training is logged.

<u>BLDG</u>	<u>ORG</u>	<u>ROOM</u>	<u>POC</u>	<u>PHONE</u>
1854	Wing	TBA	CTW 6 Physiologist	2-3997

**7. INSTRUMENT GROUND SCHOOL (IGS) AND AIRCREW COORDINATION TRAINING (ACT).**

All IUTs must attend IGS/ACT. IGS is normally held on the second Thursday of each month at 0800 in room 204 of Griffith Hall. ACT follows IGS and usually begins at 1300. These classes will run a full day, so no flights or other events should be scheduled. USAF IUTs must attend IGS in order to become familiar with Navy instrument flight rules and regulations. This course is similar to Air Force IRC/NIRC classes.

<u>BLDG</u>	<u>ORG</u>	<u>ROOM</u>	<u>POC</u>	<u>PHONE</u>
Griffith Hall	Academics	204	ITU Officer	2-2305

**8. FLIGHT INSTRUCTOR TRAINING COURSE (FITC).** All IUTs must attend FITC at Naval Aviation Schools Command (NASC, building 633, 1<sup>st</sup> deck). It is a 4-day course usually beginning on Monday at 0800. On most days, you can expect to be out of class by early afternoon. CNATRA flies in from Corpus Christi specifically to address the IUTs during this course. Your training plan should be built around FITC as it is often offered at varying intervals. Be sure a copy of the completion certificate is filed in your NATOPS jacket.

<u>BLDG</u>	<u>ORG</u>	<u>ROOM</u>	<u>POC</u>	<u>PHONE</u>
633	Schools Cmd	123	Student Stash	2-3241

**9. ACADEMIC COURSE REVIEW AND REQUIRED EXAMS.**

A) Go to book issue at Griffith Hall and pick up the Flight Training Instructions (FTIs) listed on the **“T-1/T-39 IUT Flight Publications List”** included as a separate page in your training package.

B) Ground School. You will be required to sit through ground school (NATOPS, Flight Prep, VNAV). New classes begin every other Wednesday. Ground school takes eight working days to complete, and will occupy most of the day. You will be required to take five exams prior to your first IUT hop. The first four of the open book exams listed below are administered at Griffith Hall through the testing office. The FLIP test requires you to bring pubs to the test. The INAV test is a comprehensive test involving information on the T-34C as well as the T-1A/T-39. The testing petty officer does not have this information. You are responsible for acquiring the appropriate material for each corresponding test. Be sure to speak with the ground school instructors for guidance on how to accomplish this. The fifth open book exam listed below is administered at the conclusion of your IGS class:

- Instrument Navigation (INAV)
- Flight Instrument Publications (FLIP)
- \*Visual Navigation (VNAV)
- \*Flight Prep / NATOPS
- \*Instrument Ground School (IGS)
- \* Taken after the respective ground school course. Other exams may be taken any time.

10. **NATOPS JACKET REVIEW.** This is accomplished prior to entering the flight portion of your training to ensure all required items have been completed. Your IUT coordinator will perform the review.

11. **IUT FLIGHT SYLLABUS EVENTS.** Once the above requirements have been met, you are ready to begin flying your IUT events. Make sure you stay in contact with your respective squadron scheduler and IUT coordinator to ensure you continue to fly. Now that you are flying, more careful monitoring of your progress is required. Update your IUT tracking sheet after each flight, and notify your coordinator of any problems or slowdowns in training progress.

12. **FLIGHT SYLLABUS EXAMS.** You will be required to pass a few more open and closed book exams while you are flight side. The remaining exams include: Course rules, BOLDFACE, STAN open/closed and NATOPS open/closed. **The course rules and BOLDFACE exams must be completed prior to your first instructional flight.** They are administered by your IUT coordinator or student stash. (You may take observer hops without these tests complete. For observer hops you must have an Up Chit, Swim/Physiology Quals, and Egress Training complete).

13. **NATOPS JACKET REVIEW.** Upon completion of all ground and flight training events, your NATOPS jacket will be reviewed again. Bring your logbook and ensure documentation for all completed events has been provided to the FITU coordinator. This final review will be accomplished in the FITU office. FYI, this is the time when documentation problems surface. In 99% of the cases, all required events are complete, however, your instructor designation is delayed because paperwork is missing. **MAKE SURE YOUR PAPERWORK KEEPS UP WITH YOU THROUGHOUT THE TRAINING PROGRAM!**

14. **GRADE SHEETS.** Prior to sending your paperwork to the commodore for final review, and your eventual assignment as an instructor, all grade sheets from your IUT flights must be in your FIST jacket (including your NATOPS check ride grade sheet). This is historically one of the most sizable problems in ensuring a speedy designation as an instructor. Following each flight, ensure your IUT instructor completes a grade sheet, including your FAM 1 and FAM 2 flights. Bring it to the FITU office for proper filing ASAP. You should retain a copy of each grade sheet for your records. Grade sheets are required for every event, completed or incomplete.

15. **IUT PROGRESS TRACKING INSTRUCTIONS.** Your FITU coordinator briefs the training officer every Monday morning on your progress. To that end, you will be required to fill out the IUT Progress Tracking Calendar (right side of FIST jacket) to keep us informed of your progress. This blue (or white) calendar sheet will be filled out by the IUT when events have either been scheduled or completed. The training officer wants to know what you have completed so he may monitor your time to train and assist when necessary. If something is not on the calendar, it is assumed the event is not completed or scheduled. You will update this calendar at least three times a week, of which one day will be Friday.

16. **MISCELLANEOUS.** During the IUT syllabus you will have the opportunity to take observer flights. You must have an up chit and be current in both your swim qual and physiological training to take advantage of this opportunity. Also, if you have not finished the NATOPS ground school class prior to strapping into the back of the aircraft, you must receive egress training from a qualified egress instructor. If your NATOPS ground school class is complete then this requirement has been met. IUTs are highly encouraged to take INAV and VNAV observer hops to become familiar with squadron procedures. Contact the CDO or the scheduling office for further information. It is also recommended you sit in on student briefs as you will soon be briefing students yourself.

## **FLIGHT TRAINING EVENTS**

### **FAM-0**

This is your first event following the completion of ground school. FAM-0 is an introduction to the squadron as well as the airplane. Your instructor will show you around the Ready Room and should discuss computerized weather briefs, NOTAM retrieval, grade sheets, Winflirs, how to check if you are scheduled to fly, and how to fill out the rough schedule after flight.

### **NA-1 (FAM-1: Aircraft familiarization)**

Stereo Route NPA 154 or 851

Discuss

1. Preflight briefing
  - a. Runway layout / taxi routes
  - b. Course rules / alert areas / MOA's
  - c. Performance data
    - (1) Definitions
    - (2) Standard data
    - (3) Takeoff data / critical field length
  - d. Checklists
  - e. Aircraft forms
2. Systems Review
  - a. Engine
  - b. Electrical
  - c. Hydraulics
  - d. Flight controls / trim
  - e. Navigation / communications / ICS
  - f. Bold face emergency procedures
  - g. Operating limitations

Introduce

1. Preflight / engine start procedures
  - a. Preflight
  - b. Cockpit / cabin inspection (fire extinguisher / survival equipment)
  - c. Engine start
  - d. Taxi
2. Flight
  - a. Normal takeoff
  - b. Approach turn stall
  - c. Unusual attitudes
  - d. Emergency landing gear extension
  - e. Navigation systems
  - f. Flight director / auto pilot operation
  - g. Approaches (precision / non-precision)
  - h. VFR patterns and landings (full flap, partial flap, no flap)
  - i. Full stop landing
3. Post flight

**NA-2 (FAM-2: Aircraft familiarization)**

Stereo Route NPA 154 or 851

Discuss

1. Preflight briefing
  - a. Review mission data
  - b. Performance data
    - (1) Single engine takeoff
    - (2) Climb
    - (3) Cruise
    - (4) Endurance / diverts
    - (5) Descent
  - c. Flight planning / stereo route
2. Systems review
  - a. Environmental systems
  - b. Oxygen
  - c. Anti-ice / de-ice
  - d. Windshield heat
  - e. Fuel system
  - f. Weather radar

Introduce

1. Preflight / engine start
  - a. Aircraft / cockpit lighting
  - b. Engine start malfunctions
2. Flight

- a. Cabin pressurization
- b. Oxygen mask demo
- c. Emergency descent
- d. Engine air start
- e. Fuel management
- f. Emergency and abnormal procedures
- g. Approaches and landings
  - (1) Single engine approach / landing
  - (2) Single engine missed approach
  - (3) Full stop

#### **INAV-1 (IUT-1: Right Seat)**

Route: NPA - NPA

This is your introduction to student life. As an instructor, you will train students in two phases of flight: Instrument Navigation (INAV) and Visual Navigation (VNAV). Your first hop will be in the right seat with an IUT instructor in the jump seat. Although there is no prescribed order in which to complete these flights, normally you will finish the INAV flights first then proceed to VNAVs. However, don't be surprised if you are scheduled for a VNAV prior to finishing the INAV portion of training. **Make must have your VNAV charts complete prior to entering the flight portion of your training.** Contact your Mission Commander the night before your flight to discuss conduct of the sortie. This flight is an IUT equivalent of a student's first INAV flight. You will do all of the flight planning required of a student, including planning a route of flight, completing a jet card, and DD-175.

#### Practice

1. Bold face emergency procedures
2. Equipment operation
3. Scan
4. Checklists
5. Crew coordination procedures
6. Departure
7. Altitude selection / compliance
8. En route course control
9. Turn point procedures
10. Metro / ATIS information
11. Point to point (fix to fix) navigation
12. Time estimates
13. Fuel estimates
14. Win Flir

#### Review

1. Flight brief
2. Jet log
3. DD-175 / DD-175-1
4. Communications
5. Approach

**INAV-2 (IUT-2: Right Seat)** This flight is very similar to the INAV-1. It should be geared toward a approach hop

Route: NPA - NPA

#### Review

1. Flight brief
2. Jet log
3. DD-175 / DD-175-1
4. Bold face emergency procedures
5. Equipment operation
6. Scan
7. Checklists
8. Communications procedures
9. Crew coordination procedures
10. Departure
11. Altitude selection / compliance

12. En route course control
13. Turn point procedures
14. Metro / ATIS evaluation
15. Point to point (fix to fix) navigation
16. Time estimates
17. Fuel management / analysis
18. Approach
19. Win Flir

### **Stan (standardization) Open Book Exam**

Your next flight is with a student. Before you can fly with a student, you must complete the open book portion of the standardization exam (closed book comes later). See your FITU coordinator or student stash for the test. You will not be scheduled for INAV-3 prior to the exam being graded.

### **INAV-3 (IUT-3: Instructor)**

Route: NPA - NPA

The student will be flying an INAV syllabus event. The student will fly this hop from start to finish and must have a minimum of three turn points at altitude. The student should complete at least two point to points (fix to fix) along the route of flight. The student will call you or the Mission Commander (IUT Instructor) the night before the flight. Be ready to direct the student as necessary. All requirements and standards are in accordance with the Master Curriculum Guide. You will be briefing this hop to the student and providing instruction / evaluation from the jump seat. Your IUT instructor will be present throughout the event. Call your IUT instructor with any questions.

Practice

1. Head work
2. Brief procedures and techniques
3. En route procedures and techniques
4. Debrief procedures and techniques

### **INAV-4 (IUT-4: Instructor check)**

Route: NPA – NPA

Same format as INAV-3

### **VNAV-5 (IUT-5: Right Seat)**

Stereo Route: NPA 500

You are a student again and back in the right seat for visual navigation (VNAV) instruction. The IUT instructor will be in the jump seat. Remember, you may be scheduled for VNAV-5 prior to finishing your INAV hops so be ready for it. The flight should be scheduled as stereo route NPA-500 so there will be no need to meet at base operations to file a flight plan. You will be flying the VR-1020 twice. As with the INAV right seat flights, you will be expected to meet all of the preflight planning requirements of a SNFO. Arrive at the brief with the VNAV chart you constructed (to proper standards), along with a jet log and DD-175.

Introduce

1. Identify turn points
2. Identify intermediate checkpoints
3. Turn point procedures
4. Base course / airspeed adjustments
5. Standard time corrections
6. Standard course corrections
7. BDHI (bearing distance heading indicator) corrections
8. Wind analysis
9. Fuel management analysis
10. Low level chart

Review

1. Emergency procedures
2. Equipment operation
3. Scan
4. Checklists
5. Flight brief / procedures review
6. Jet log

7. DD-175 / DD-175-1
8. Communications
9. Departure / approach
10. Altitude selection / compliance
11. Metro / ATIS information
12. Win Flir

**VNAV-6 (IUT-6: Right Seat)**

Stereo Route: NPA 505

Same as VNAV-5, but you will be scheduled for NPA-505. You will fly VR-1021 twice.

Introduce

1. Identify turn points
2. Identify intermediate checkpoints
3. Turn point procedures
4. Base course / airspeed adjustments
5. Standard time corrections
6. Standard course corrections
7. BDHI (bearing distance heading indicator) corrections
8. Wind analysis
9. Fuel management analysis
10. Low level chart

Review

1. Emergency procedures
2. Equipment operation
3. Scan
4. Checklists
5. Flight brief / procedures review
6. Jet log
7. DD-175 / DD-175-1
8. Communications
9. Departure / approach
10. Altitude selection / compliance
11. Metro / ATIS information
12. Win Flir

**VNAV-7 (IUT-7: Right Seat)**

Stereo Route: NPA 502

Same as VNAV-5 and VNAV-6, but you will be scheduled for NPA-502. You will fly VR-1022 twice.

Review

1. Identify turn points
2. Identify intermediate checkpoints
3. Turn point procedures
4. Base course / airspeed adjustments
5. Standard time corrections
6. Standard course corrections
7. BDHI (bearing distance heading indicator) corrections
8. Wind analysis
9. Fuel management analysis
10. Low level chart
11. Emergency procedures
12. Equipment operation
13. Scan
14. Checklists
15. Flight brief / procedures review
16. Jet log
17. DD-175 / DD-175-1
18. Communications
19. Departure / approach
20. Altitude / approach

21. Metro / ATIS information
22. Win Flir

**VNAV-8 (IUT-8: Instructor)**

Route: VR-1021

As with your later INAV flights, you will now be instructing a student (VNAV-6). You will be flying one of the low level routes you have already seen. This route will most likely be the VR-1021. These low level hops should be scheduled as an NPA stereo routing, and therefore, will not require official filing of a DD-175 at base operations. You will be briefing this hop to the student(s) and providing instruction / evaluation from the jump seat. Your IUT instructor will be present throughout the event. All requirements and standards are in accordance with the Master Curriculum Guide.

Practice

1. Headwork
2. Brief procedures and techniques
3. En route procedures
4. Debrief procedures and techniques

**VNAV-9 (IUT-9: Instructor)**

Route: VR-1022

Same as VNAV-8. You will be instructing a student (VNAV-7). This route will most likely be the VR-1022.

Practice

1. Headwork
2. Brief procedures and techniques
3. En route procedures
4. Debrief procedures and techniques

**Stan (standardization) closed book exam**

Prior to your VNAV-10X (standardization check flight), you must complete the Stan closed book exam. See your FITU coordinator or student stash for the test. The exam must be graded prior to your check ride. Again, plan ahead! Expect to fly your VNAV-10X the day following your VNAV-9.

**VNAV-10X (Standardization check flight)**

Route: VR-1020

This is your final check from the standardization department prior to being designated an instructor. You will be briefing and instructing a student (VNAV-5).

Check

1. Headwork
2. Brief procedures and techniques
3. En route procedures
4. Debrief procedures and techniques

**NATOPS Open Book and NATOPS Closed Book**

Before flying your NA-3X NATOPS check, you must complete the open and closed book NATOPS exams. See your FITU coordinator or student stash for the tests. Usually, your NATOPS check flight is the last flight of the training syllabus. However, based on scheduling/student availability, your NATOPS check may be administered anytime after you complete the NATOPS open/closed book exams.

**NA-3X (NATOPS check flight)**

Stereo Route NPA 154 or 851

You will be scheduled with a NATOPS instructor and fly a profile ranging anywhere from going into the Pensacola MOA (as on your FAM-1/2) to flying an INAV flight into an unfamiliar field. Further questions about this flight should be directed to your FITU coordinator.