

**BY ORDER OF THE  
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2T-38,  
VOLUME 1**



**20 JANUARY 2011**

**AIR EDUCATION AND TRAINING  
COMMAND  
Supplement**

**12 JULY 2011**

**Flying Operations**

**T-38 AIRCREW TRAINING**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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**RELEASABILITY:** There are no releasability restrictions on this publication.

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OPR: HQ AETC/A3FV

Certified by: HQ USAF/A3O-A/DS  
(Col Luther S. Turner)

Supersedes: AFI11-2T-AT-38V1, 1 June  
2005

Pages: 66

(AETC)

OPR: HQ AETC/A3FV

Certified by: HQ AETC/A3F  
(Col Charles E. Catoe)

Supersedes: AFI 11-2T/AT-38, Volume 1,  
AETC Sup, 2 June 2005

Pages:43

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**This instruction implements AFD 11-2, *Aircraft Rules and Procedures*; and AFI 11-202, Volume 1, *Aircrew Training*.** It establishes the minimum Air Force standards for training and qualifying personnel performing duties in the T-38 aircraft. This publication applies to Air Force Reserve Command and the Air National Guard. (**Note:** References in this instruction to OG/CC are the 53 TEG/CC for Det 1, 53 TEG.) File a copy of all approved waivers with this instruction. Major commands (MAJCOM) will coordinate MAJCOM-level supplements to this volume through HQ AETC/A3FV to HQ USAF/A3O-AT for approval prior to publication. Field units below MAJCOM level will coordinate their supplements with their parent MAJCOM office of primary responsibility (OPR) before publication. Submit suggested improvements to this publication on AF Form 847, Recommendation for Change of Publication, to the parent MAJCOM through standardization/evaluation (stan/eval) channels, who will forward approved recommendations to HQ AETC/A3FV. The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. Privacy Act System of Records Notice F011 AF XO A,

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**SUMMARY OF CHANGES**

**This document is substantially revised and must be completely reviewed.** This revision includes major changes throughout the document; changes title of document from AFI 11-2T/AT-38V1 to AFI 11-2T-38; changes all references to T/AT-38 to T-38; moves information in the ~~recommended changes and waivers~~ section of Chapter 1 to the beginning of the document; changes HQ AETC/DO to HQ AETC/A3 (paragraph 1.1.2); clarifies sortie allocation guidance (paragraph 1.5); adds guidance on the Aircrew Graduate Evaluation Program (paragraph 1.6); adds guidance on progress reviews (paragraph 1.7); adds guidance on fuel conservation (paragraph 1.8); clarifies guidance for Flight Surgeon requirements (paragraphs 2.6.1.6 and 2.6.2); adds Chapter 3, Mission Qualification Training; deletes reference to 6 months and changes to 210 days for landing recurrency requirements (paragraph 4.3.3); updates Table 4.1 to change currency from ~~Precision Approach~~ to ~~Instrument Approach~~ and Note 2 to clarify requirements for regaining currency; adds guidance for loss of instructor qualification and requalification (paragraph 4.4.2.1); deletes Table 3.2. T/AT-38 Annual Sortie and Event Requirements; clarifies guidance to Prorating Requirements (paragraph 4.5.3); and updates dates associated with numerous references (Attachment 1).

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## Chapter 1

### GENERAL GUIDANCE

#### 1.1. Responsibilities:

1.1.1. **Supervisors.** Supervisors at all levels are responsible for monitoring the progress of aircrew training to ensure timely progression through appropriate training phases and for identifying areas for which additional training is needed.

1.1.2. **HQ AETC/A3 Personnel.** HQ AETC/A3 personnel will:

1.1.2.1. Host periodic conferences to review ground and flying training requirements and programs for applicable units. Conference participants will include the OPR and applicable MAJCOM representatives.

1.1.2.2. Process all change requests.

1.1.2.3. Determine training requirements.

1.1.2.4. Review subordinate unit supplements and training programs annually.

1.1.3. **Wings and Groups.** Wings and groups will:

1.1.3.1. Assist subordinate units in managing training programs, ensure programs meet unit needs, and provide necessary staff support.

1.1.3.2. Develop programs to ensure training objectives are met. Forward copies of unit training programs that expand on the minimum guidelines of this instruction and subsequent changes to the appropriate MAJCOM for review.

1.1.3.3. Review programs and supplements annually.

1.1.3.4. Identify training shortfalls through appropriate channels.

1.1.3.5. **(Added-AETC) CT Status.** Operations group commanders will report CT status to 19 AF/DO semiannually in accordance with MDS specific attachments. Units will report total CT hours flown, and (*UFT, ENJJPT, ENJJPT PIT, and PIT only*) total number of ID sorties flown solo.

1.1.4. **Squadron Commanders.** Squadron commanders will:

1.1.4.1. Ensure aircrew members under their supervision are properly trained and that they maintain a level of proficiency required to effectively accomplish the flying training mission.

1.1.4.2. Ensure review of training and evaluation records of newly assigned aircrew and those completing formal training to determine the training required to achieve qualification and to ensure provisions of this instruction have been met.

1.1.4.3. Brief new instructors on their instructor responsibilities prior to accomplishing student training.

1.1.4.4. Develop the instructor ability of assigned and attached instructors by effective management of the unit's flying hour program.

1.1.4.5. Determine and certify missions and events in which individual aircrew may participate.

1.1.4.5. (AETC) Publish a roster of pilot qualifications and certifications (Attachment 5) according to AFI 11-202, Volume 1/AETC Supplement.

1.1.4.6. Report end-of-cycle training deficiencies through the operations group (OG) to the appropriate numbered Air Force (NAF) and MAJCOM.

1.1.4.7. Identify the levels of supervision required to accomplish the required training, unless specifically directed elsewhere.

1.1.4.8. Help the wing and group develop unit training programs.

1.1.5. **Flight Commander.** Flight commanders will:

1.1.5.1. Monitor currencies and requirements for assigned and attached aircrew.

1.1.5.2. Ensure aircrew only participate in sorties, events, and tasks for which they are adequately prepared, trained, and current.

1.1.6. **Individual Aircrew Members.** Individual aircrew members will:

1.1.6.1. Hand-carry available training records to assist the gaining unit in assessing qualifications and training requirements.

1.1.6.2. Be responsible for completing training requirements and currencies within the guidelines of this instruction.

1.1.6.3. Ensure they only participate in ground and flying activities for which they are qualified and current unless the activity is part of an upgrade syllabus leading to qualification.

## 1.2. Phases of Training:

1.2.1. **Initial Qualification Training (IQT).** This training is necessary to qualify aircrew for duties in the T-38 aircraft. See Chapter 2 for IQT program requirements.

1.2.2. **Mission Qualification Training (MQT).** This training is necessary to qualify aircrew for specific unit mission or local area requirements. Training may be incorporated in MAJCOM-approved IQT syllabi. See Chapter 3 for MQT requirements.

1.2.2. (AETC) Completion of a HQ AETC/A3-approved syllabus results in qualification as basic mission capable (BMC) according to AFI 11-202, Volume 1, and may not be designated as MR until completion of theater indoctrination (TI) and certification by the squadron commander. See paragraph 4.9 of this supplement for TI requirements.

1.2.3. (AETC) Table 1.1 (Added) defines minimum requirements for unit commanders to designate aircrew as experienced. **Exception:** Wing, group, and squadron leadership will be designated experienced in accordance with the basic instruction. Commanders will designate experience level on the Letter of Xs.

**Table 1.1. (Added)(AETC) Experienced Aircrew Requirements.**

I	A	B
T E M	Crew position	Minimum Flying Hour Requirements
1	Pilot	150 rated hours primary or instructor flight time in the aircraft and 600 hours total rated time <u>or</u> 250 rated hours primary or instructor flight time in the aircraft and 450 hours total rated time.
2	WSO (Note)	500 hrs of total fighter time and 100 hrs total time in the T-38.
<b>Note:</b> For WSOs, fighter time is hours logged in aircraft assigned an AFSC of 12F3X or 12F4X.		

1.2.3.1. **Inexperienced Aircrew.** Aircrew not designated as experienced will progress through a program managed by the flight commander to develop sound flying skills. Flight commanders will tailor each program based on the new aircrew's performance in IQT and past flying experience. No time limit has been established to transition from inexperienced to experienced.

1.2.3.2. **CT Meetings.** Commanders will direct and supervise periodic CT meetings for aircrew members. The purpose of these meetings is to discuss standardization and mission-related topics and to increase general knowledge. A cockpit and/or crew resource management (CRM) topic or scenario should be discussed in each CT meeting referring to CRM core concepts from AFI 11-290, *Cockpit/Crew Resource Management Training Program*. Using MAJCOMs will detail CT meeting requirements in their MAJCOM supplement.

1.2.3.2. **(AETC)** AETC units will conduct continuation training (CT) meetings at least quarterly. They will discuss instructional techniques and grading practices at each CT meeting. A cockpit/crew resource management (CRM) topic will be discussed at each formal quarterly CT meeting in accordance with AFI 11-290, *Crew/Cockpit Resource Management Training Program*. CRM topics are not required at informal CT meetings. Traditional reservists will attend quarterly CT meetings during their mandatory unit training assembly.

1.2.3.3. **Night Vision Goggles (NVG) Training.** NVG training is not authorized.

1.2.3.4. **(Added-AETC) Solo ID Sorties.** (*UFT, ENJJPT, ENJJPT PIT and PIT only*) Since the focus is on instructor development, ID sorties will be scheduled and flown dual to the maximum practical extent. Squadron operations officers, or higher, may authorize solo ID sorties on a case-by-case basis.

### 1.3. Training Concepts and Procedures:

1.3.1. Unless specifically directed, the squadron commander will determine the level of supervision required to accomplish in-flight training. If the mission objectives include introduction to tasks or instruction to correct previous discrepancies, an instructor pilot (IP) may be required. If mission objectives require directed supervision, a squadron supervisor may be warranted.

1.3.2. IPs and flight lead-qualified squadron supervisors may allow any pilot to lead limited portions of a mission if the pilot has been appropriately briefed. This provision will only be used to allow a pilot to practice events in which he or she is already qualified or to help determine if a pilot is ready for an upgrade program. In either case, the IP or squadron supervisor is responsible for the flight.

1.3.3. Units will complete training requirements during the appropriate training cycle except where specifically excepted. Using MAJCOMs will detail the training cycle in their MAJCOM supplement.

1.3.4. **(Added-AETC)** There are two semiannual CT training cycles, 1 January to 30 June, 1 July to 31 December of each calendar year.

1.3.5. **(Added-AETC)** IFF training requirements are tracked on an annual basis.

### 1.4. Training Records and Reports. Units will:

1.4.1. Maintain aircrew records for individual training and evaluations in accordance with (IAW) AFI 11-202, Volumes 1 and 2, and the RDS.

1.4.2. Maintain formal course or equivalent training records for assigned and attached aircrew.

1.4.3. Maintain documentation for each certification in the individual's training records, or on an AF IMT 1381, *USAF Certification of Air Crew Training*, or AF Form 4348, *USAF Aircrew Certifications*.

1.4.4. Prepare and forward training reports IAW MAJCOM directives.

1.4.5. Document training in ARMS, using the forms or IMTs specified in AFI 11-202, Volume 1.

1.4.6. Track the following information for all aircrew, as applicable:

1.4.6.1. Ground training dates accomplished and due.

1.4.6.2. Flying hours by 30/60/90-day and cumulative totals.

1.4.6.3. Event requirements and accomplishments by cumulative total and amount remaining for the training cycle.

1.4.6.4. Sortie and event currencies and expiration dates. **Note:** Units may specify additional training folder requirements.

### 1.5. Sortie Allocation Guidance. Units will use the following guidance to determine priority for unit training sortie allocation:

1.5.1. Higher headquarters-directed missions and aerial events.

- 1.5.2. Deployment support.
- 1.5.3. Evaluations.
- 1.5.4. API-1 CT, including upgrade-directed support.
- 1.5.5. API-2 CT, if applicable.
- 1.5.6. API-6 CT.
- 1.5.7. API-8 CT.
- 1.5.8. Supervisory flights.
- 1.5.9. Flight Surgeon (FS) flying requirements.
- 1.5.10. Indoctrination or familiarization flights.
- 1.5.11. Other orientation flights.

**1.6. Aircrew Graduate Evaluation Program.** Refer to the appropriate formal course syllabus or command directive for aircrew graduate evaluation procedures. The program may be accessed at <https://www.my.af.mil/agepiftprod>.

**1.7. Progress Reviews.** Refer to the appropriate formal course syllabus or command directive for progress review procedures.

**1.8. Fuel Conservation.** It is the responsibility of all aircrew to conserve fuel to the maximum extent possible. Individual crew members and supervisors at all levels will manage aviation fuel as a limited commodity and precious resource. Fuel optimization will be considered throughout all phases of mission planning and execution. Once the objectives of training are complete, sorties will be terminated at the earliest opportunity. Adherence to average sortie duration will not be the driving factor of whether to land the aircraft or continue the mission.

**1.9. Waivers.** HQ AF/A3O-A is the waiver authority for training requirements established by AFI 11-202, Volume 1. Except as specified elsewhere in this instruction the MAJCOM/A3 is waiver authority for this instruction.

**1.9. (AETC)Waivers.** Units will submit waiver requests through the chain of command to HQ AETC/A3FV.

1.9.1. Request waivers through applicable stan/eval channels to MAJCOM/A3, (or equivalent). As applicable, MAJCOM/A3s will forward requests to HQ USAF/A3O-A, with an information copy to HQ USAF/A3O-AT.

1.9.2. Waiver authority for supplemental guidance will be as specified in the supplement and approved through higher level coordination authority.

**1.10. (Added-AETC) Pilot Utilization Policy:**

1.10.1. **(Added-AETC)** Commanders will ensure wing pilots fill only authorized positions in accordance with unit manning documents (UMD) and pilot status is properly designated. The overall objective is for pilots to perform operations-related duties. Supervisors may assign pilots to valid, short-term tasks (escort officer, flying evaluation board [FEB] member, mishap board member, etc.), but must continually weigh the factors involved (level of pilot tasking, flying proficiency, currency, and experience).

1.10.2. **(Added-AETC)** Duties required by various publications that may be assigned to aircrew position indicator (API)-1 pilots are weapons and tactics officer, programmer, flying safety officer, SOF, mobility and contingency plans, training (except Aviation Resource Management System [ARMS] documentation), standardization/evaluation liaison officer (SELO), squadron aircrew flight equipment continuation training instructor, electronic combat officer, and other duties directly related to flying operations. API-1s will not be attached to wing staffs or man wing staff positions unless total wing pilot API-1/6 manning is 100 percent or better. Commanders will ensure wing staff pilots (API-6s) perform duties justified in MAJCOM manpower standards documents and authorized in UMDs.

**1.11. (Added-AETC) Indoctrination Flier Training.** Units will document indoctrination flier training on a unit-developed checklist. Indoctrination fliers will accomplish the following initial checkout:

1.11.1. **(Added-AETC)** A review with an IP of the aircraft flight manual (Technical Order 1T-38C-1; AFI 11-2T-38, Volume 3, *T-38 Operations Procedures*; and unit supplements.

1.11.2. Egress training according to AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*.

1.11.3. **(Added-AETC)** An aircraft cockpit review of crew coordination, proper checklist use, normal and emergency procedures applicable to aircrew position, operation of aircraft equipment, and basic aircraft characteristics. This review must be completed in an operational flying trainer (OFT), unit training device (UTD), or weapons system trainer (WST).

## Chapter 2

### INITIAL QUALIFICATION TRAINING (IQT)

**2.1. General.** This chapter outlines the IQT program for the T-38. The primary method of initial qualification is to attend and complete the appropriate formal training course listed in education and training course announcement (ETCA). Completing the appropriate formal course satisfies basic qualification training requirements. When attendance is not practical or quotas are not available, units will request waivers from the MAJCOM/A3 to conduct in-unit qualification training, using formal school courseware.

2.1.1. Upon completion of the IQT program, aircrew will be qualified IAW AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*; and AFI 11-2T-38, Volume 2, *T-38 Aircrew Evaluation Criteria*.

2.1.2. Except in unusual circumstances, aircrew members undergoing IQT will receive ground and flight instruction *with minimum interruption* and complete training within the time specified by the syllabus. For formal training course IQT, failure to complete training within the specified time limit requires notifying the gaining wing commander of the aircrew's name and grade, reason for delay, planned actions, and estimated completion date.

**2.2. Prerequisites.** Before entering qualification training, each aircrew member must comply with the appropriate formal course training prerequisites. In addition, all personnel maintaining flying status will meet the physical examination; physiological training; and survival, evasion, resistance, and escape (SERE) training requirements in AFI 11-202, Volume 1, before flying.

**2.3. Ground Training.** Ground training will follow the formal course syllabus flow, but may be tailored to local conditions and the individual's background and experience. For in-unit qualification training, commanders will obtain and use current formal school courseware, if available.

**2.4. Flying Training.** Aircrew in IQT will fly under IP supervision until completing the qualification evaluation unless otherwise specified by their MAJCOM supplement. Formal course syllabus mission objectives and tasks are minimum requirements for IQT. Additional training due to student nonprogression is available within the constraints of the formal course syllabus. Pilots may satisfy MQT and upgrade training requirements during IQT if the appropriate IP is available and the formal course training allows it.

**2.5. Senior Officer Qualification.** Comply with the guidance provided in AFI 11-401, *Aviation Management*, and AFI 11-202, Volume 1.

2.5.1. **(Added-AETC)** General officer flying training wing (FTW) commanders will be fully qualified IPs and have a completed AF IMT 8, *Certificate of Aircrew Qualification*, according to the requirements of AFI 11-401 and AFI 11-202, Volume 2. The 19 AF/CC may be a fully qualified IP. If current and qualified, general officers in command billets may fly without an IP in their primary aircraft. Other general officers and those maintaining basic qualifications or less must fly with an IP.

### 2.5.2. (Added-AETC) FTW Key Personnel:

2.5.2.1. (Added-AETC) Senior leaders (wing commanders, wing vice commanders, OG/CCs, and operations group deputy commanders) will complete introduction to fighter fundamentals (IFF) mission qualification training (MQT) (air-to-air and/or air-to-ground), upgrading instructor pilot (UIP), pilot instructor training (PIT), or pilot instructor requalification (PIRQ), as appropriate.

2.5.2.2. (Added-AETC) Wing commanders, wing vice commanders, OG/CCs, and operations group deputy commanders may be dual qualified (that is, IP qualified in one type aircraft and FP qualified in another).

2.5.2.3. (Added-AETC) Wing commanders will ensure equal representation of senior leaders in all wing aircraft types by selecting primary and secondary aircraft (IP and FP) qualification for each senior leader for approval by 19 AF/CC. The OG/CC will be flight examiner (FE) qualified in his or her primary aircraft.

2.5.2.4. (Added-AETC) Wing flying safety officers (FSO) will maintain IP qualification in their primary mission aircraft. There will be at least one FSO for each primary mission aircraft.

## 2.6. Flight Surgeon (FS) Training:

2.6.1. **Ground Training.** Ground training will include:

2.6.1.1. Aircraft general review.

2.6.1.2. Cockpit and/or crew resource management (CRM) training IAW AFI 11-290, *Cockpit/Crew Resource Management Training Program*.

2.6.1.3. Aircrew flight equipment and procedures training IAW AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*.

2.6.1.4. Egress training IAW AFI 11-301, Volume 1.

2.6.1.5. An instrument and emergency procedure (EP) review with an instructor.

2.6.1.5. (AETC) Accomplish this review in the OFT, UTD, or WST, if available.

2.6.1.6. The completion of an FS examination IAW AFI 11-202, Volume 2.

2.6.2. **Flying Training.** A FS is qualified to occupy the RCP. An FS will not operate the controls unless an IP is at the controls and will not fly during critical phases of flight.

**2.7. Requalification Training.** An aircrew member is unqualified upon expiration of his or her qualification evaluation or loss of currency exceeding 6 months (paragraph 4.3). Follow the requalification guidance in AFI 11-202, Volume 1.

**2.8. IP Requalification Training.** See paragraph 4.4.2.

**2.9. Conversion and/or Difference Qualification.** Conversion qualification follows the guidance in this chapter and the formal course conversion syllabus. Difference training is authorized for pilots converting from the T-38C to the T-38A/B or vice a versa. MAJCOMs will provide difference training guidance.

**2.9. (AETC) Conversion/Difference Qualification.** Conduct difference training according to the appropriate formal course syllabus.

## Chapter 3

### MISSION QUALIFICATION TRAINING (MQT)

#### 3.1. General. MAJCOM will determine MQT requirements.

3.1.1. **(Added-AETC)** MQT qualifies T-38 aircrew for Specialized Undergraduate Pilot Training (SUPT), ENJJPT, or IFF IP duty. **(Exception:** With 19 AF/DO approval, T-38-qualified senior officers may complete a limited IFF MQT for direct support mission qualification (BMC). Refer to paragraph 3.7.) MQT is normally conducted in conjunction with IQT according to the formal course pilot instructor training (PIT), ENJJPT PIT, or IFF upgrade instructor (UIP) syllabus. Additional sorties and requirements to become an MR PIT or IFF IP capable of instructing IPs in the upgrade instructor syllabus are at the discretion of the squadron commander.

3.1.2. **(Added-AETC)** Pilots who have completed MQT are basic mission capable (BMC) according to AFI 11-202, Volume 1, and may not be designated as MR until completion of TI and certification by the squadron commander.

3.1.3. **(Added-AETC)** Pilots must complete MQT within the training time prescribed in the formal course syllabus. The 19 AF/DO is the waiver authority for training time extensions. Units will document all waivers in the individual's training folder. MQT is considered complete after successful completion of a mission evaluation in accordance with AFI 11-202, Volume 2 and AFI 11-2-T-38, Volume 2.

**3.2. (Added-AETC) Prerequisite.** Pilots must complete T-38 IQT prior to beginning MQT. Before entering MQT, each aircrew member must comply with the prerequisites in the appropriate formal course training syllabus and AFI 11-202, Volume 1.

**3.3. (Added-AETC) Ground Training.** When MQT is not is not conducted in conjunction with IQT, minimum ground training will consist of the ground training required by the instructor phase of the formal course instructor syllabus.

**3.4. (Added-AETC) Flying Training.** When MQT is not conducted in conjunction with IQT, complete the instructor phase sorties required by the formal course instructor syllabus.

**3.5. (Added-AETC) Training Documentation.** Document MQT in the individual's training folder.

**3.6. (Added-AETC) Sorties Documentation.** When MQT is not completed by formal course training, log MQT sorties as mission support sorties. MQT sorties may be used to meet sortie and event requirements during the training cycle in which they are flown.

**3.7. (Added-AETC) Senior Officer Limited IFF MQT.** Senior officers pilots with previous fighter experience may complete a locally developed, 19 AF/DO-approved MQT program for the IFF mission. This program will require a Form 8 mission evaluation in accordance with AFI 11-202, Volume 2. Aircrew will be qualified as BMC at the completion of the mission evaluation. Aircrew will only fly events they are qualified for (air-to-air or air-to ground) or as part of training leading to qualification.

3.7.1. **(Added-AETC)** Air-to-Air Mission Qualification. At a minimum, pilots will perform the following events for air-to-air mission qualification:

3.7.1.1. **(Added-AETC)** Academic Training. Specialized training and phase briefs, IFF syllabus review, briefing/debriefing instruction, AHC academics, BFM academics.

3.7.1.2. **(Added-AETC)** Simulator Training. Mission EPE, offensive BFM, defensive BFM, high aspect BFM.

3.7.1.3. **(Added-AETC)** Flying Training. AHC, offensive BFM, formation direct support, defensive BFM, high aspect BFM, bandit direct support, mission evaluation.

3.7.2. **(Added-AETC)** Air-to-Ground Mission Qualification. At a minimum, pilots will perform the following events for air-to-ground mission qualification:

3.7.2.1. **(Added-AETC)** Academic Training. Specialized training and phase briefs, AHC, low level, IFF syllabus review, briefing/debriefing instruction, surface attack academics.

3.7.2.2. **(Added-AETC)** Simulator Training. Emergency procedures, mission EPE, low level, conventional range procedures and patterns, tactical weapons delivery events/patterns.

3.7.2.3. **(Added-AETC)** Flying Training. Low level, conventional range procedures and patterns, tactical weapons patterns/deliveries, surface attack direct support, mission evaluation.

## Chapter 4

### CONTINUATION TRAINING (CT)

**4.1. General.** This chapter outlines minimum ground and flying training requirements for T-38 aircrew CT. There are two aspects of CT. The first consists of aircrew training in the basic flying skills, which ensures safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions or taskings. Taskings may be locally generated or higher headquarters directed. Using MAJCOMs will define additional currencies and requirements in their MAJCOM supplement.

**4.1. (AETC)GENERAL.** The objectives of the CT program are to increase instructional skills, enhance basic maneuver flying skills, and meet maneuver currency requirements. While individual maneuver proficiency is very important, it does not ensure instructors continue to develop their instructional skills and techniques. As such, the primary emphasis of the CT program must be continuous instructor development as opposed to simple maneuver proficiency. To that end, aircrews will manage aviation fuel as a limited and costly resource, and consider fuel optimization throughout all phases of the CT program's planning and execution. Units will ensure ground operations (engine start time/taxi routing) and flight profiles are optimized for efficient fuel usage. Units will only use CT flying hours to accomplish the requirements outlined in this publication. CT sorties will be referred to as Instructor Development (ID) sorties. ID sorties will not be used to "fill" a flying schedule or manage flying hour goals/programs. Squadron commanders must manage the squadron's flying hour program (FHP) to ensure all aircrews are afforded ample opportunity to complete all required CT. One tool is the use of squadron commander approved profiles during all ID sorties. Profiles will detail the minimum events and/or currency maneuvers required to complete an effective ID sortie. ID sortie crews and formations will be matched by experience as much as possible allowing more experienced instructors the opportunity to mentor and develop less experienced instructors. Squadron commanders may delegate management of the CT program no lower than the squadron operations officer.

**4.2. Ground Training.** Ground training accomplished during IQT and MQT may be credited toward CT requirements for the training cycle in which it was accomplished. AFI 11-202, Volume 1, specifies ground training requirements. Using MAJCOMs may specify additional ground training requirements in their MAJCOM supplement. Units will track ground training requirements in ARMS.

**4.2. (AETC)Ground Training.** See Table 4.4 (Added).

#### **4.3. Flying Training Currencies and Recurrency:**

**4.3.1. Currency.** Table 4.1 lists minimum currency requirements for T-38 aircrew. Using MAJCOMs may specify additional events or sortie currencies in their MAJCOM supplement. If an aircrew member loses a particular currency, he or she may not perform that sortie or event except to regain currency.

**4.3.1. (AETC)** In addition to the minimum currency requirements in Table A2.1 of the basic AFI, all pilots will maintain currency requirements shown in Table A2.1, and sortie/event requirements shown in Table 4.5 and Table 4.6 (IFF only). Pilots may update

any currency or log events during any type mission, including student instructional missions where the instructor demonstrates the maneuver for the student's training.

**Table 4.1. T-38 Pilot Currencies.**

I T E M	A	B	C	D	E
	Event or Sortie	Inexperienced	Experienced	Affects BAQ?	Notes
1	Landing	30	45	Yes	1
2	Instrument Approach			No	90
3	IP RCP Landing	60	4		
4	IP RCP Night Landing	90	4, 5		

**NOTES:**

1. See paragraph 4.3.3 of this instruction.
2. Non current pilots will increase their weather minimum by one category. To regain currency, supervision level is a current and qualified instructor in the aircraft or element. If the instructor is in the aircraft, the instructor's weather minimums may be used.
3. Instrument approaches may be flown from either cockpit when simulating instrument meteorological conditions (IMC) with a qualified safety observer or during actual IMC. MAJCOMs determine limitations when instrument approach currency is expired.
4. Rear cockpit (RCP) landings update both RCP landing currency and normal landing currency. FCP landing currency is good day or night.
5. Accomplish night landings between the end of evening civil twilight and the beginning of morning civil twilight. To regain RCP night landing currency, three night landings must be accomplished from the RCP and the FCP IP must be qualified (not necessarily current) in FCP and RCP night landings. See paragraph 4.3.2 of this instruction.

4.3.2. **Recurrency.** Recurrency is required when an aircrew member does not meet a currency requirement in this instruction. Supervision level is a current and qualified instructor in the aircraft or element. Training identified as "affects basic aircraft qualification (BAQ)" requires regression to an unqualified status until recurrency training is completed. Unless otherwise specified in this instruction, supervisory requirements pertaining to recurrency may be satisfied in the flight position that offers the best control of the mission, as determined by the squadron commander.

**Table 4.4. (Added-AETC) Pilot and WSO Ancillary/Ground Training.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>Subject</b>	<b>Frequency</b>	<b>Reference Directives</b>	<b>Grounding</b>
<b>1</b>	Aircrew flight equipment familiarization training (LL01)	One time	AFI 11-301 as supplemented	Yes
<b>2</b>	Aircrew flight equipment training	Annually		
<b>3</b>	Emergency egress training, ejection seat			
<b>4</b>	Emergency procedures simulator	Annually	AFI 11-2T-38, Volume 1	No
<b>5</b>	Boldface examination	Monthly		
<b>6</b>	Local area survival training	One time	AFI 16-1301 as supplemented	
<b>7</b>	Emergency parachuting training	Annually		
<b>8</b>	Noncombat survival training	Every 3 years		
<b>9</b>	Water survival training			
<b>10</b>	Instrument refresher course	Periodically	AFMAN 11-210	
<b>11</b>	CRM training	Annually	AFI 11-290 as supplemented	
<b>12</b>	Antihijacking training		AFI 13-207 (FOUO)	

4.3.2. **(AETC)** Unless otherwise specified, supervision level is a current and qualified instructor in the aircraft or element.

4.3.3. **Landing Recurrency.** Landing currency is required to maintain BAQ. Loss of landing currency over 210 days (225 days experienced) requires requalification training IAW AFI 11-202, Volume 2, and AFI 11-2T-38, Volume 2. Loss of landing currency less than 210 days (225 days experienced) requires the following action: (**Note:** Timing starts from last landing.)

4.3.3.1. **For 31 to 90 Days (46 to 90 Days Experienced).** Accomplish at least three satisfactory landings with a landing-current IP.

4.3.3.2. **For 91 to 135 Days.** Comply with the actions in paragraph 4.3.3.1 and complete an instructor-supervised EP and instrument review session (normal, emergency, and instrument procedures).

4.3.3.3. **For 136 to 210 Days (to 225 days Experienced).** Comply with the actions in paragraphs 4.3.3.1 and 4.3.3.2, and complete the qualification written examinations and an emergency procedures evaluation (EPE). Documentation of AF 8, *Certificate of Aircrew Qualification*, is not required.

#### 4.4. Special Categories:

4.4.1. **Instructor Event or Sortie Currency.** If an instructor becomes noncurrent in an event or sortie not affecting basic aircraft qualification BAQ, instructor status may be retained, but he or she will not instruct in that event or sortie until the required currency is regained. Table 4.1 lists supervision required for recurrency training.

4.4.2. **Loss of Instructor Qualification and Requalification.** An instructor will be unqualified for:

4.4.2. (AETC) **Loss of Instructor Qualification and Requalification.** Refer to Attachment 2 and paragraph 4.4.2.4. in this supplement.

4.4.2.1. Cause IAW AFI 11-202, Volume 2.

4.4.2.2. A failed flight evaluation. To regain instructor status, an instructor must successfully complete a flight evaluation IAW AFI 11-202, Volume 2.

4.4.2.3. A failed qualification or instrument written examination. To regain instructor status, an instructor must successfully re-accomplish the written examination.

4.4.2.4. **(Added-AETC)** In addition to the requirements in AFI 11-202, Volume 2, paragraphs 4.4.2.4.1 (Added) through 4.4.2.4.4. (Added), provide a timeline criteria for requalifying instructors. Joint specialized undergraduate pilot training (JSUPT), Euro-NATO joint jet pilot training (ENJJPT), PIT, ENJJPT PIT, and IFF instructors who have not performed a student instructional sortie for:

4.4.2.4.1. **(Added-AETC)** A period of up to 225 days will fly a minimum of 1 ID sortie with a current and qualified instructor (IFF IPs will fly a minimum of 1 DS sortie on an IFF student mission with a qualified instructor in the RCP) in order to update all expired currencies in accordance with Table A2.1. Also refer to paragraph 4.3.3 and Attachment 2 of the basic AFI.

4.4.2.4.2. **(Added-AETC)** A period of 226 days to 2 years may complete a locally generated upgrade at the discretion of the OG/CC. An individual upgrade recurrency program will be developed, taking into account the aircrew member's previous experience and currency. Send a copy of the proposed training program to 19 AF/DO for approval. Highly experienced instructors will conduct the flying training. An instrument/qualification evaluation and an instructor flight evaluation will be completed for recertification.

4.4.2.4.3. **(Added-AETC)** A period of 2 to 5 years must complete the appropriate requalification syllabus.

4.4.2.4.4. **(Added-AETC)** A period of more than 5 years must complete the appropriate PIT syllabus.

4.4.3. **Demanding Sortie.** MAJCOMs will list sorties or events requiring demanding sortie currency in their MAJCOM supplement. Aircrew who do not have demanding sortie or event currency will not participate in demanding sorties without the proper level of supervision as determined by the squadron commander.

4.4.4. **Flight Surgeon (FS).** FSs will accomplish CT IAW AFI 11-202, Volume 1.

4.4.4. **(AETC)** Flight surgeons will accomplish aircrew flight equipment and egress training annually according to AFI 11-301, Volume 1, as supplemented,

4.4.5. **Higher Headquarters API-8 Aircrew.** For training other than that conducted in support of a formal inspection, higher headquarters personnel must coordinate with the supporting unit as follows:

4.4.5.1. Aircrew will ensure appropriate ARMS data is maintained and provided IAW AFI 11-401.

4.4.5.2. Units will review the qualifications and currencies of higher headquarters-assigned aircrew before authorizing them to fly. Units will evaluate the demands of each mission scenario and ensure higher headquarters-assigned aircrew ability and proficiency will not be exceeded.

4.4.5.3. Aircrew will submit qualification and authorization documentation to the supporting squadron commander or operations officer prior to flying with that squadron.

4.4.6. **(Added-AETC) Buddy Instructor Pilot (BIP) Program.** The BIP Program will be accomplished in accordance with Attachment 3 (Added).

4.4.7. **(Added-AETC) IFF Special Mission Training.** IFF special mission training will be accomplished in accordance with Attachment 4 (Added).

#### 4.5. Annual Training Requirements:

4.5.1. **MAJCOMs.** Will determine minimum annual requirements. Sorties and events accomplished during MQT may be credited toward CT requirements for the training cycle in which they were accomplished. Before an aircrew member may fly in the new training cycle, the OG commander will determine if additional training is required. (**Note:** Additional training may be required, depending on the type and magnitude of the deficiency.)

4.5.1. **(AETC)** Aircrew members will accomplish sortie and event requirements listed in Table 4.5 (Added) and Table 4.6 (Added) of this supplement, as applicable. If an aircrew member fails to maintain sortie or event requirements, the squadron commander will review the crewmember's status to determine appropriate action in accordance with AFI 11-402, *Aviation and Parachute Service, Aeronautical ratings and Badges*. BMC aircrew members must complete a MAJCOM mission qualification course and a *mission* evaluation. Once qualified, the crewmember will maintain the same CT sortie and event requirements (excluding ID and student instructional sorties) as an instructor, based on the crewmember's experience level. BAQ aircrew members maintain the basic currencies listed in the basic 11-2T-38, Vol 1 and Table 4.5 of this instruction (Added). The 19 AF/DO is the reviewing, additional training, and waiver authority for 19 AF FEs. The following additional sortie and event requirements apply in AETC:

4.5.1.1. **(Added-AETC)** Solo CT Sorties. JSUPT, ENJJPT, ENJJPT PIT, and PIT (including ENJJPT PIT) IP CT sorties should be flown dual to the maximum extent possible.

4.5.1.2. **(Added-AETC)** Logging CT Sorties. Only one IP in the aircraft may log a ID sortie, but the other pilot may log events accomplished for currency if he or she shares the flying time.

**EXCEPTION:** An experienced IP flying with another experienced IP may dual-log instrument and navigation sorties (including low level).

4.5.1.3. **(Added-AETC)** Requirements to Log Events:

4.5.1.3.1. **(Added-AETC)** Event requirements may be accomplished with student instructional training when the IP demonstrates the maneuver or event. **EXCEPTION:** Instrument approaches may be updated on undergraduate student sorties only when flown at night or in IMC.

4.5.1.3.2. **(Added-AETC)** Traffic patterns and landings will be performed from the RCP. **EXCEPTION:** IFF and PIT IPs may accomplish event requirements from either cockpit.

4.5.1.3.3. **(Added-AETC)** Formation takeoffs, interval takeoffs, and formation landings may be logged from the lead or wing position.

**Table 4.5. (Added-AETC) SUPT, ENJJPT, ENJJPT PIT, and PIT Minimum Semiannual T-38 Sortie and Event Requirements.**

I T E M	A	B	C	D
	Category	MR	BMC	Notes
		Semiannual		
<b>Pilot Sorties</b>				
1	Instructor Development Sorties	10/18		1
2	EP/CRM Simulator	1/2	1/2	3
3	FCF	6/-		4
<b>Pilot Events</b>				
4	Published Approach Procedure	3/3	3/3	6
5	Total Instrument Approaches	8/12	8/12	
6	Precision Approach	2/4	2/4	
7	Nonprecision Approach	2/4	2/4	
8	Single-Engine Precision Approaches	2/2	2/2	
9	Single-Engine Nonprecision Approaches			
10	Circling Approaches	2/2	2/2	7
11	No-Flap Pattern/Landing	2/2	2/2	8
12	Single-Engine Pattern and Landing			
13	Night Landing	2/2	2/2	2
14	HUD-off Instrument Approach	1/1	1/1	9
15	Formation Takeoff	2/4	2/4	5
16	Formation Landing			
17	Single-Engine (SE) Go-Around/ Missed Approach	2/2	2/2	

**NOTES:**

1. IPs only. Fly at least one ID sorties in each syllabus category (contact/transition, instruments/ navigation, formation, and low-level) per semiannual period.
2. Only required for pilots who maintain night certification.
3. See paragraph 4.11 of this publication for guidance.
4. One FCF sortie per half may be credited when flown in an appropriately-configured simulator on a simulated full FCF profile.
5. Demonstrate from either the lead or wing position. A formation takeoff cannot be logged on single ship interval takeoffs, i.e., 10 seconds of spacing between aircraft.
6. Demonstrate a complete procedure (high or low altitude) from the IAF to landing or missed approach.
7. Demonstrate the circling maneuver at the end of a published approach or low closed pattern where local procedures are established.
8. May be logged with single-engine precision or non-precision approach.
9. Accomplish in the FCP with the HUD dimmed from view or in the RCP. May be logged with any instrument approach.

**Table 4.6. (Added-AETC) T-38 (IFF) Annual Sortie and Event Requirements.**

I T E M	A	B	C	D	E
	Category	Pilot		WSO	Notes
		MR (I/E)	BMC	MR	
1	Instructor Development Sorties	24/18		20/16	1
	Advanced Handling Characteristics (AHC) ID	1/1		1	
	Instrument ID	6/4		4	
	Air Combat Training (ACBT) ID	6/4		4	
	Surface Attack (SA) ID	6/4		4	3
	Low-Level Navigation (LL NAV) ID	2/2		2	
2	Advanced Handling Characteristics (AHC) Sortie		1		
3	Instrument Sortie		4		
4	Air Combat Training (ACBT) Sortie		4		2
5	Surface Attack (SA) Sortie		4		3,4
6	Low-Level Navigation (LL NAV) Sortie		2		4
2	EP/CRM Simulator	2/2	2	2	
3	Published Approach Procedure	6/4	4		5
4	Total Instrument Approaches	20/16	16		
5	Precision Approaches	8/6	6		
6	Nonprecision Approaches	8/6	6		
7	Single-Engine Precision Approaches	3/2	2		
8	Single-Engine Nonprecision Approaches	3/2	2		
9	HUD-Off Instrument Approach	4/2	2		6
10	No-Flap Pattern and Landing	6/4	4	4	
11	SE Pattern and Landing	4/2	2	4	7
12	Single-Engine Go-Around/Missed Approach	4/2	2	4	8

**NOTES:**

1. MR pilots and MR WSOs only. Credit AHC, ACBT, SA, Instrument, and LL Nav ID sorties.
2. Not required for IFF BMC pilots that have a mission evaluation in air-to-ground sorties only.
3. Demonstrate SA events from the FCP.
4. Not required for IFF BMC pilots that have a mission evaluation in air-to-air sorties only.
5. Demonstrate a complete procedure (high or low altitude) from the IAF to landing or missed approach.
6. Accomplish in the FCP with the HUD dimmed from view or in the RCP. May be logged with any instrument approach.
7. May be logged with single-engine precision or non-precision approach.
8. May be accomplished in the simulator.

4.5.2. **Squadron Commanders.** Will approve profiles for all required CT sorties. Profiles will detail the minimum events and currency items to be accomplished on the sortie (for example, aircraft handling characteristics [AHC] maneuvers, approaches, or emergency patterns and landings).

4.5.3. **Prorating Requirements.** Squadron commanders:

4.5.3.1. May prorate training requirements IAW AFI 11-202, Volume 1, at the end of the training cycle.

4.5.3.2. Will prorate requirements only to adjust for genuine circumstances of training non-availability, not to mask training or planning deficiencies.

4.5.3.3. Will consider newly assigned or qualified pilots who achieve qualification after the 15th of the month to be in CT on the first day of the following month.

**4.6. Multiple Qualification Requirements.** MAJCOMs will specify which sorties and events flown in other aircraft may be used to satisfy T-38 sortie and event requirements in their MAJCOM supplement.

**4.6. (AETC)Multiple Mission Qualification Requirements.** T-38 aircrew members with multiple mission qualifications must meet all T-38 CT requirements. T-38 aircrew members with multiple mission qualifications may credit sortie and event requirements from Table 4.5 and 4.6, i.e., HUD-off instrument approach logged on an IFF sortie counts towards the requirements in Table 4.5.

**4.7. Multiple Qualification Currencies.** MAJCOMs will specify which sorties and events flown in other aircraft may be used to satisfy T-38 currencies in their MAJCOM supplement.

**4.7. (AETC)Multiple Qualification Currencies.** Pilots will fly at least once each 45 days in each aircraft they maintain qualification in. They will comply with all other currency requirements for each aircraft.

**4.8. (Added-AETC) Functional Check Flight (FCF) Pilots.** Also refer to FCF pilot requirements are listed in Table 4.5 (Added) of this supplement. If an FCF is flown dual, it may be counted as an FCF flight for both pilots provided a proportionate number of test items are accomplished by each pilot. If an FCF pilot fails to meet sortie requirements, see paragraph 4.5.1 of this supplement. **NOTE:** For further information about the FCF program, see paragraph 5.6 (Added) and Attachment 1 (Added).

**4.9. (Added-AETC) Theater Indoctrination (TI) Training.** TI is the beginning of the local pilot upgrade process. It is during TI that skills learned during IQT and MQT are reinforced in the local flying environment. New pilots will fly a local orientation mission prior to the specific TI category missions. This local orientation mission will focus on local departure, military operating area, recovery, and pattern operations. The mission should allow new unit pilots to absorb as many of the local idiosyncrasies as possible before concentrating on required category missions. The TI category missions should focus on training techniques, local constraints, common student errors, and should use local routes and bases to the maximum extent possible.

4.9.1. **(Added-AETC)** Pilots in TI will fly with assistant flight commanders and above, check pilots, or pilots designated by the squadron commander.

4.9.2. **(Added-AETC)** Pilots will not perform instructor duties or the unit mission prior to completing TI.

4.9.3. **(Added-AETC)** Record TI in the training folder.

4.9.4. **(Added-AETC)** TI sorties will be logged as training support sorties and may meet CT requirements during the period in which they are flown. As a minimum, fly the following missions in table 4.7 (Added):

4.9.5. **(Added-AETC)** Except for the local orientation sortie, these missions may be combined if all training objectives are met. TI sorties will include normal operations and emergency situations in the local area such as diversions, single runway operations, and emergency airfields.

4.9.6. **(Added-AETC)** After successfully completing TI, the squadron commander certifies the new pilot as MR or BAQ, as applicable.

4.9.7. **(Added-AETC)** PIT squadron commanders may tailor TI for previous MR IPs directly gained from JSUPT squadrons; however, at a minimum, a local familiarization sortie must be accomplished.

4.9.8. **(Added-AETC)** Squadron commanders may tailor TI for FPs; however, at a minimum, a local familiarization sortie must be accomplished.

4.9.9. **(Added-AETC)** Squadron commanders may waive TI for pilots that remain at the same base in which they completed MQT.

**Table 4.7. (Added-AETC) T-38 TI Sortie Requirements.**

<b>I</b>	<b>A</b>	<b>B</b>	<b>C</b>
<b>T</b>			
<b>E</b>		<b>JSUPT, ENJJPT, and</b>	
<b>M</b>	<b>Sortie Description</b>	<b>PIT</b>	<b>IFF</b>
<b>1</b>	Local Orientation	X	X
<b>2</b>	Contact/Transition Sortie	X	
<b>3</b>	Basic Fighter Maneuvers (BFM)		X
<b>4</b>	Surface Attack (SA)		X
<b>5</b>	Instrument/Navigation Sortie	X	
<b>6</b>	Formation Sortie	X	
<b>7</b>	Low-level Sortie	X	

## Chapter 5

### SPECIALIZED TRAINING PROGRAMS

**5.1. Overview.** This chapter outlines upgrade training programs for special capabilities and qualifications. These programs are intended to provide a basic starting point and may need to be modified by the squadron commander, based on the unit's requirements and the aircrew's previous experience, qualifications, and documented performance. Unless governed by a formal course syllabus, ground and device training for these programs will consist of unit-developed academics and scenarios. Flight training will be conducted IAW a program approved by the squadron commander. Using MAJCOMs may specify additional specialized training programs in their MAJCOM supplement.

**5.2. Instructor Upgrade.** Follow a MAJCOM-approved formal course syllabus.

**5.3. RCP Night Landing Qualification Training:**

**5.3. (AETC)RCP Night Landing Qualification.** RCP night landing qualification consists of spatial disorientation training and at least one RCP night sortie with a RCP night landing qualified IP. Accomplish spatial disorientation training before the first night sortie.

**5.3.1. Spatial Disorientation (SD) Ground Training.** SD ground training will consist of both an SD briefing and an SD training system demonstration that focus on prevention, recognition and recovery. SD briefing requirements are met by currency in the instrument refresher course. If an SD training system is not available, ground training may consist of a SD briefing only, but special emphasis on SD prevention, recognition and recovery must be made during the briefing.

**5.3.1. (AETC)** The spatial disorientation training should be accomplished in the spatial disorientation demonstrator, if available.

**5.3.2. Flying Training.** For initial qualification, an IP qualified in RCP night landings must occupy the FCP. The IP being night qualified will accomplish a minimum of three RCP landings. Night landings to gain or regain night landing qualification will be accomplished between the end of evening civil twilight and the beginning of morning civil twilight.

**5.3.2. (AETC)** The night qualification sortie will be an instrument or navigation sortie emphasizing spatial disorientation prevention, cockpit lighting, night instruments, local area and traffic pattern procedures, and visual references. Units may authorize additional training, as required.

**5.4. Formation and/or Flight Lead Upgrade.** Using MAJCOMs will publish formation and/or flight lead training programs in their MAJCOM supplement. Completion of a formal course syllabus may satisfy this requirement.

**5.4. (AETC)Formation and/or Flight Lead Upgrade.** Completion of a formal instructor course syllabus qualifies pilots for flight lead duties.

**5.5. Low Altitude Training Upgrade.** Using MAJCOMs will publish low altitude upgrade programs in their MAJCOM supplement. Completion of a formal course syllabus may satisfy this requirement.

**5.5. (AETC)Low Altitude Training Upgrade.** Completion of a formal instructor pilot course syllabus (PIT or UIP), or for IFF, specialized training, qualifies aircrew members for low altitude training.

**5.6. Functional Check Flight (FCF) Training.** MAJCOMs will publish FCF pilot training requirements in their MAJCOM supplements.

**5.6. (AETC)FCF Pilot Training.** Units will train and certify FCF pilots as follows:

5.6.1. **(Added-AETC)** Prerequisites.

5.6.1.1. **(Added-AETC)** FCF pilots will be IP qualified with a minimum of 750 total flying hours and 200 IP or FP hours in the T-38, or 650 total hours and 300 IP or FP hours in the T-38.

5.6.1.2. **(Added-AETC)** FCF IPs must have at least 4 months of experience conducting T-38 FCFs. The FCF section chief will consider the number of FCFs actually flown before recommending FCF pilots for FCF IP status. FCF IPs will train new FCF pilots and administer FCF certification flights according to local unit training programs.

5.6.1.3. **(Added-AETC)** Ground Training. Ground training will include a review of applicable technical orders and publications, including, as a minimum, AFI 21-101, *Aerospace Equipment Maintenance Management*; TO 1-1-300; *Technical Manual, Acceptance/Functional Check Flight and Maintenance Operational Checks*; 1T-38C-6CF-1, *Acceptance and Functional Check Flight Procedures Manual, USAF Series T-38C Aircraft*; and local FCF procedures.

5.6.1.4. **(Added-AETC)** Flying Training. Pilots will fly a representative sample of FCF profiles with FCF IP supervision. Upon completion of the training program, the FCF IP will complete an AF IMT 4287, *Functional Check Flight Certification Record T-38 Aircraft*. **Note:** For further information about the FCF program, see (Added) Attachment 1.

**5.7. Adopted Forms and IMTs:** AF IMT 8, *Certificate of Aircrew Qualification*

AF Form 847, *Recommendation for Change of Publication*

AF IMT 1381, *USAF Certification of Air Crew Training*

AF Form 4348, *USAF Aircrew Certifications*

**5.7. (AETC)Forms (or IMTs) Adopted.** AF Form 8, *Certificate of Aircrew Qualification*;

AF Form 847, *Recommendation for Change of Publication*;

AF Form 4287, *Functional Check Flight Certification Record T-38 Aircraft*

**5.8. (Added-AETC) AETC T-38 Lead-In Training for T-6 and First Assignment Instructor Pilots (FAIP):**

5.8.1. **(Added-AETC)** T-6 FAIPs are authorized T-38 familiarization training at home wings prior to attending IFF. This training will normally consist of 10 T-38 aircraft sorties and 2 simulators. Prior to flying the first aircraft sortie, T-6 FAIPs will complete an instructor-monitored systems review, workbook, or computer-based training, as determined locally; T-38 open- and closed-book tests; a boldface examination; T-38 egress training; and normal procedures and EP training in the simulator. Aircraft sortie emphasis should focus on transition, AHC, instrument, and formation categories.

5.8.2. **(Added-AETC)** Conduct all training from the front seat and use a grade sheet appropriate to the familiarization category to document progress and potential problem areas for each sortie. Assign an overall grade of No Grade (NG) to each mission. A grade of Unsatisfactory (U) may be assigned if basic airmanship, safety, or flight discipline is determined to be dangerous.

5.8.3. **(Added-AETC)** In addition to familiarization training sorties, sandbag sorties are authorized.

5.8.4. **(Added-AETC)** Members will establish training records that will be hand-carried to IFF training units.

5.8.5. **(Added-AETC)** The OG/CC may authorize additional aircraft or simulator sorties based on individual needs.

**5.9. (Added-AETC) Night Formation Qualification:**

5.9.1. **(Added-AETC)** Only crewmembers qualified in night formation may fly in a formation between the end of evening civil twilight and the beginning of morning civil twilight.

5.9.2. **(Added-AETC)** RCP night landing qualification is a prerequisite.

5.9.3. **(Added-AETC)** For initial night formation qualification, a night formation-qualified IP must be in the aircraft. Night formation training will emphasize night-lighting procedures, visual signals, formation approaches (lead and wing), and formation split-up. Units may authorize additional training, as required.

5.9.4. **(Added-AETC)** Pilots will update their currency by flying a portion of the sortie on the wing between the end of evening civil twilight and the beginning of morning civil twilight. If dual, both pilots may update currency. To regain currency, they will complete initial night formation qualification training.

**5.10. (Added-AETC) Annual EP and CRM Training:**

5.10.1. **(Added-AETC)** All aircrew will maintain EP and CRM mission currency. The mission should be accomplished in the simulator. If no certified simulator instructor is available, a T-38 IP may administer the simulator. Instructors may take credit for an EP and CRM simulator when administering the simulator.

5.10.2. **(Added-AETC)** Because of local emergency scenarios, a locally generated simulator EP and CRM instructor guide will be used when administering the simulator. The EP simulator mission will include the following as a minimum (paragraphs 5.11.2.1 (Added) through 5.11.2.5 (Added)):

5.10.2.1. **(Added-AETC)** A cross-section of thrust deficient situations (for example, a low or abnormal thrust situation in the low altitude (500' AGL) environment).

5.10.2.2. **(Added-AETC)** Use of HUD-only, HDD-only, and standby instrument use.

5.10.2.3. **(Added-AETC)** All BOLDFACE procedures. The instructor will also emphasize selected noncritical action emergencies.

5.10.2.4. **(Added-AETC)** At least one CRM practice scenario using CRM core concepts from AFI 11-290.

5.10.2.5. **(Added-AETC)** Applicable mishap lessons learned identified by MAJCOM, wing, or unit safety staffs.

5.10.2.6. **(Added-AETC)** A reduced runway condition reading or hydroplaning stopping scenario.

5.10.2.7. **(Added-AETC)** A scenario covering nosewheel steering characteristics above normal taxi speeds, and in emergency scenarios with directional control problems.

5.10.2.8. **(Added-AETC)** One emergency procedure per phase of flight.

5.10.2.9. **(Added-AETC)** A compounding emergency situation tying two aircraft emergencies closely together (for example, tire failure on takeoff leading to FOD and a compressor stall; bird strike leading to structural damage or canopy loss in flight; compressor stall leading to engine fire, etc.).

5.10.3. **(Added-AETC)** Pilots and WSOs must attend an academic CRM refresher each calendar year. This training will be tracked in ARMS.

### **5.11. (Added-AETC) Graduate Break in Training (BIT) Flying:**

5.11.1. **(Added-AETC)** UFT and T-38C transition course graduates who will exceed 45 days between class graduation and their follow-on flying training class start date are authorized to fly additional, dedicated, front cockpit (FCP) aircraft training sorties after graduation. These additional training sorties are mandatory for IFF-bound and fighter FTU-bound graduates to maintain landing currency. They are optional for all others. Missed sorties, including due to TDY or leave must be made up. Waiver authority is the student's assigned base wing commander (i.e., not the TDY base) for all aircraft or simulator events.

5.11.2. **(Added-AETC)** In addition to dedicated FCP sorties, extra ~~–sandbag~~” sorties and simulators are authorized and encouraged based on availability. These ~~–sandbag~~” sorties may be flown in either the FCP or RCP. Unlimited simulator sorties are authorized on a space-available basis.

5.11.3. **(Added-AETC)** Document accomplishment of all events and forward along with the rest of the student's training documentation.

5.11.4. **(Added-AETC)** Boldface testing will be accomplished according to local directives to ensure a safe level of proficiency is maintained. MQF testing is not required.

5.11.5. **(Added-AETC)** A ~~sortie~~” refers to any sortie, FCP or RCP, including dedicated or ~~sandbag~~”.

5.11.5.1. **(Added-AETC)** A ~~FCP (type) sortie~~” refers to a dedicated sortie where the primary mission is proficiency for the BIT student, who is expected to fly hands-on for at least 50% of the time.

5.11.5.2. **(Added-AETC)** FCP sorties may replace simulators, but a minimum of 1 simulator every 30 days is required.

5.11.6. **(Added-AETC)** For IFF/fighter FTU-bound graduates:

5.11.6.1. **(Added-AETC)** SQ/CCs will ensure BIT events are managed and scheduled to provide maximum benefit. BIT students will be assigned to a rated flight commander, who will ensure all BIT events are documented. Grade sheets are required for dedicated FCP sorties and all required simulators.

5.11.6.2. **(Added-AETC)** Specific emphasis will be placed on formation and instrument training.

5.11.6.3. **(Added-AETC)** If a BIT student fails to meet graduate standards, the SQ/CC will focus training to correct deficiencies. If performance remains below standards, the OG/CC and wing commander should consider reassignment to a less demanding MWS. In no case should a student be sent to follow-on training if they lack the potential to complete the course.

5.11.6.4. **(Added-AETC)** Pre-IFF-BIT sorties (FCP and ~~sandbag~~”) may be flown with a UFT, PIT or IFF squadron. On dedicated FCP sorties, only missions and events previously introduced in UFT or the T-38C transition syllabus will be flown. On RCP ~~sandbag~~” sorties, students will not fly hands-on during IFF-specific events. Individual maneuver grades will be graded against the UFT or T-38C transition course syllabus course training standards (CTS). The overall grade will be NG (no grade) or Unsatisfactory (U).

5.11.6.5. **(Added-AETC)** Post-IFF BIT required sorties (Table 5.2) will be flown with the IFF squadron only. Syllabus-directed events that were unaccomplished during IFF may be flown, but proficiency is not required. New events will not be introduced. Individual tasks will be graded against the IFF syllabus. The overall grade will be NG (no grade).

**Table 5.1. (Added-AETC) Pre-IFF BIT Requirements.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>Duration of BIT</b>	<b>Days Prior to Follow-On Training</b>	<b>Required to Update</b>	<b>Frequency</b>
<b>1</b>	> 90 Days	>90 Days	1 Sortie & 1 Simulator	Every 14 days
		90-46 Days	1 Sortie Every	Every 7 days
			1 Simulator	Every 14 days
		45-16 Days	1 FCP sortie	Every 7 Days
			1 Simulator	
Last 15 Days	3 FCP Formation Sorties			
	2 Simulators			
<b>2</b>	61-90 Days	90-46 Days	1 Sortie Every	Every 7 days
			1 Simulator	Every 14 Days
		45-16 Days	1 FCP Sortie & 1 Sortie	Every 14 Days
			1 Simulator	
		Last 15 Days	2 FCP Formation Sorties	
1 Simulator				
<b>3</b>	46-60 Days	60-16 Days	1 Sortie	Every 7 Days
			1 Simulator	Every 14 Days
		Last 15 Days	2 FCP Formation Sorties	
			1 Simulator	
<b>4</b>	45 Days or Less	Last 15 Days	1 FCP Formation Sortie & 1 Sortie	
			1 Simulator	

**Table 5.2. (Added-AETC) Post-IFF BIT Requirements.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
	<b>Duration of BIT</b>	<b>Days Prior to Follow-On Training</b>	<b>Required to Update</b>	<b>Frequency</b>	<b>Notes</b>
<b>1</b>	> 90 Days	91+ Days	1 Sortie & 1 Simulator	Every 14 Days	
		90-61 Days	1 FCP ACBT or SA sortie & 1 additional sortie	Every 7 Days	1
			1 simulator	Every 14 Days	
		60-30 Days	2 FCP ACBT or SA sorties	Every 7 Days	1
			1 simulator	Every 14 Days	
Last 15 Days	3 FCP ACBT or SA Sorties & 2 Simulators				
<b>2</b>	61-90 Days	90-61 Days	1 FCP ACBT or SA sortie & 1 additional sortie	Every 14 Days	1
			1 simulator		
		60-30 Days	1 FCP ACBT or SA sortie & 1 additional sortie	Every 7 Days	
			1 simulator	Every 14 Days	
<b>3</b>	46-60 Days	60-30 Days	1 FCP ACBT or SA sortie & 1 additional sortie	Every 14 Days	1
			1 simulator		
<b>4</b>	45 Days or Less		No additional requirements		
<b>Note:</b>					
1. 30 days, or until departure for FTU, whichever is later. Students should not depart for FTU earlier than 30 days prior to FTU start date unless to attend training enroute (TDY enroute). In this case, SQ/CCs will tailor the BIT program for maximum benefit prior to departure. Comply with any gaining FTU currency requirements.					

5.11.6.6. **(Added-AETC)** Aeronautical orders will reflect ASC IX, FAC 2. All training will be logged in accordance with AFI 11-401. Instructors may log events in accordance with paragraph 4.5.1.3 (Added).

5.11.6.7. **(Added-AETC)** For IFF graduates who will not exceed a 45-day break-in-training, additional sorties are not automatically authorized. However, wing commanders may authorize orientation sorties for these graduates in any wing aircraft in accordance with AFI 11-401 and its AETC supplement.

**5.12. (Added-AETC) T-38 Stall/Sink Rate Awareness Training Program (JSUPT, ENJPPT, ENJJPT PIT and PIT Only):**

5.12.1. **(Added-AETC) T-38 Stall/Sink Training Mission.** Conduct the T-38 stall/sink training mission according to Attachment 5 (Added). Only qualified stall pilots will conduct stall training.

5.12.1.1. **(Added-AETC) Stall Recognition and Recovery Currency.** This currency will be updated on a dual sortie at least once every 180 days. In order to update currency, the pilot must fly a minimum of one full aft stick stall and a minimum of one turning and one landing attitude approach to stall. The stall/sink rate orientation flight given by a designated stall pilot updates this currency for both pilots.

5.12.1.2. **(Added-AETC) Stall Seminar.** Qualified stall pilots will conduct an annual stall and sink rate seminar during the first quarter of each calendar year. Attendance is mandatory for all assigned T-38 pilots. If the crewmember misses the annual seminar, he or she will attend a makeup seminar given by a qualified stall pilot or review the materials used during the seminar (slide presentation and meeting minutes). Failure to complete the annual seminar prior to 31 March will result in a loss of stall currency. Crewmembers assigned to the unit after 31 March or attending IQT are exempt from this requirement.

5.12.1.3. **(Added-AETC) When Stall Currency Is Lost.** A crewmember not current in stalls will not fly student instructional sorties or solo sorties. If currency is lost due to failure to attend the annual stall seminar, the crewmember must complete a stall seminar per para. 5.13.1.2.

5.12.1.4. **(Added-AETC) To Regain Stall Currency.** Pilots must practice stall recognition and recovery on a dual CT sortie with a stall-current IP.

**5.12.2. (Added-AETC) Initial Stall/Sink Rate Awareness Training (JSUPT, ENJJPT, ENJJPT PIT and PIT Only):**

5.12.2.1. **(Added-AETC)** Each IP must fly a stall and sink rate orientation flight within 8 to 14 months of PIT graduation. The IP will occupy the primary seat in which he or she instructs (RCP for JSUPT and ENJJPT; FCP for PIT).

5.12.2.2. **(Added-AETC)** Document the completed stall/sink rate awareness mission in the individual's training folder.

**5.12.3. (Added-AETC) Stall Pilot Qualification and Currency:**

5.12.3.1. **(Added-AETC)** Unit designated stall pilots will normally be stan/eval FEs. In special circumstances, squadron or operations group commanders may designate highly experienced T-38 IPs as stall IPs.

5.12.3.2. **(Added-AETC)** Designated T-38 stall pilots will attend one stall seminar and fly three stall training sorties.

5.12.3.3. **(Added-AETC)** A semiannual stall pilot CT meeting will be conducted to discuss demonstration standardization, ground briefing, seminar techniques, problems, policies, and training objectives.

5.12.3.4. **(Added-AETC)** Stall pilots will fly a stall sortie once every 90 days to maintain currency. To regain currency, the stall pilot must conduct a stall sortie with a current stall pilot.

5.12.3.5. **(Added-AETC)** Stall pilot training will be documented in the individual's training folder and the letter of Xs. See Attachment 6 (Added) for a sample T-38 letter of Xs.

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DCS, Operations, Plans and Requirements

**(AETC)**

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**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

- (Added-AETC)** AFI 11-218, *Aircraft Operations and Movement on the Ground*, 11 May 2005
- (Added-AETC)** AFI 11-301, Volume 1/AETC Sup 1, *Aircrew Lift Support (ALS) Program*, 25 February 2009
- (Added-AETC)** AFI 13-201, *Airspace Management*, 1 December 2006
- (Added-AETC)** AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010
- AFPD 11-2, *Aircraft Rules and Procedures*, 14 January 2005
- AFI 11-2T-38, Volume 2, *T-38 Aircrew Evaluation Criteria*, 27 April 2009
- AFI 11-202, Volume 1, *Aircrew Training*, 22 November 2010
- AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, 13 September 2010
- AFI 11-214, *Air Operations Rules and Procedures*, 22 December 2005
- AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 11 April 2001
- AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*, 25 February 2009
- AFI 11-401, *Aviation Management*, 7 March 2007
- AFMAN 33-363, *Management of Records*, 1 March 2008
- DoDI 7730.57, *Aviation Career Incentive Act and Required Annual Report*, 18 July 2003
- Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, November 22, 1943
- Executive Order 13478, *Amendment to Executive Order 9397, Relating to Federal Agency Use of Social Security Numbers*, November 18, 2008
- Privacy Act of 1974
- Public Law 92-204, *Appropriations Act of 1973*
- Public Law 93-294, *Aviation Career Incentives Act of 1974*, May 31 1974
- Public Law 93-570, *Continuing Appropriations, 1975*, February 28, 1975
- (Added-AETC)** TO 1-1-300, *Acceptance/Functional Check Flights and Maintenance Operational Checks*, 14 November 2007
- (Added-AETC)** TO 1T-38A-6CF-1, *Acceptance and Functional Check Flight Procedures*, 15 June 2004
- AFI 11-218, *Aircraft Operations and Movement on the Ground*, 11 May 2005
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- AFI 13-201, *Airspace Management*, 1 December 2006
- AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010

TO 1-1-300, *Acceptance/Functional Check Flights and Maintenance Operational Checks*, 14 November 2007

TO 1T-38A-6CF-1, *Acceptance and Functional Check Flight Procedures*, 15 June 2004

United States Code: Title 37, 301a, *Incentive Pay: Aviation Career*, February 1, 2010

***Abbreviations and Acronyms***

**(Added) AETC) ACBT**—air combat training

**(Added) AETC) ACT**—air combat tactics

**AFE**—aircrew flight equipment

**AGL**—above ground level

**AGSM**—anti-G straining maneuver

**AHC**—aircraft handling characteristics

**AETC)AHC**—advanced handling characteristics

**ARMS**—Aviation Resource Management System (formerly AFORMS)

**AETC)ARMS**—Aviation Resource Management System

**BAQ**—basic aircraft qualification

**(Added) AETC)BMC**—basic mission qualification

**(Added) AETC)BSA**—basic surface attack

**(Added) AETC)CAS**—close air support

**(Added) AETC)CCIP**—constantly computed impact point

**CRM**—cockpit/crew resource management

**CT**—continuation training

**(Added) AETC) (D)ACM**—(dissimilar) air combat maneuvering

**(Added) AETC) (D)ACT**—(dissimilar) air combat tactics

**(Added) AETC) (D)BFM**—(dissimilar) basic fighter maneuvers

**(Added) AETC)DTC**—data transfer cartridge

**EP**—emergency procedure

**AETC)EP**—emergency procedure

**EPE**—emergency procedures evaluation

**ETCA**—education and training course announcement

**(Added) AETC) FAIP**—first assignment instructor pilot

**FCF**—functional check flight

**FCP**—front cockpit

(Added) AETC) FE—flight examiner  
FS—flight surgeon  
(Added) AETC) FSO—flying safety officer  
(Added) AETC) FTW—flying training wing  
(Added) AETC) HUD—heads up display  
IAW—in accordance with  
(Added) AETC) IFF—introduction to fighter fundamentals  
(Added) AETC) ILS—instrument landing system  
IMC—instrument meteorological conditions  
AETC)IMC—instrument meteorological conditions  
IMT—information management tool  
IP—instructor pilot  
IQT—initial qualification training  
(Added) AETC) IWSO—instructor weapons systems officer  
(Added) AETC) LOW A/A—low altitude air-to-air  
(Added) AETC) LOW ALT—low altitude  
(Added) AETC) LOWAT—low altitude training  
(Added) AETC) LRS—long range strafe  
MAJCOM—major command  
MQT—mission qualification training  
(Added) AETC) MR—mission ready  
NAF—numbered Air Force  
NVG—night vision goggles  
(Added) AETC) OFT—operational flight trainer  
OG—operations group  
(Added) AETC) OG/CC—operations group commander  
(Added) AETC) OIF—operational information file  
OPR—office of primary responsibility  
(Added) AETC) PAR—precision approach radar  
(Added) AETC) PIT—pilot instructor training  
(Added) AETC) PWC—pilot weather category  
RDS—records disposition schedule

**RCP**—rear cockpit  
**(Added) AETC) SA**—surface attack  
**(Added) AETC) SAT**—surface attack tactics  
**SD**—spatial disorientation  
**(Added) AETC) SE**—single engine  
**(Added) AETC) SQ/CC**—squadron commander  
**(Added) AETC) SSE**—simulated single engine  
**stan/eval**—standardization/evaluation  
**(Added) AETC) TI**—Theater Indoctrination  
**(Added) AETC) UIP**—upgrading instructor pilot  
**(Added) AETC) VMC**—visual meteorological conditions  
**(Added) AETC) WSO**—weapons system officer  
**ACBT**—air combat training  
**ACT**—air combat tactics  
**AHC**—advanced handling characteristics  
**ARMS**—Aviation Resource Management System  
**BMC**—basic mission qualification  
**BSA**—basic surface attack  
**CAS**—close air support  
**CCIP**—constantly computed impact point  
**D)ACM**—(dissimilar) air combat maneuvering  
**D)ACT**—(dissimilar) air combat tactics  
**D)BFM**—(dissimilar) basic fighter maneuvers  
**DTC**—data transfer cartridge  
**EP**—emergency procedure  
**FAIP**—first assignment instructor pilot  
**FE**—flight examiner  
**FSO**—flying safety officer  
**FTW**—flying training wing  
**HUD**—heads up display  
**IFF**—introduction to fighter fundamentals  
**ILS**—instrument landing system

**IMC**—instrument meteorological conditions

**IWSO**—instructor weapons systems officer

**LOWAT**—low altitude training

**LOW A/A**—low altitude air-to-air

**LOW ALT**—low altitude

**LRS**—long range strafe

**MR**—mission ready

**OFT**—operational flight trainer

**OG/CC**—operations group commander

**OIF**—operational information file

**PAR**—precision approach radar

**PIT**—pilot instructor training

**PWC**—pilot weather category

**SA**—surface attack

**SAT**—surface attack tactics

**SE**—single engine

**SQ/CC**—squadron commander

**SSE**—simulated single engine

**TI**—Theater Indoctrination

**UIP**—upgrading instructor pilot

**VMC**—visual meteorological conditions

**WSO**—weapons system officer

### *Terms*

**Demanding sortie**— A sortie that tasks the aircrew to the extent that flying frequency and continuity are most critical. Sorties and events requiring demanding sortie currency include ACBT ((D)BFM, (D)ACM, (D)ACT), LOWAT (LOW ALT, LOW A/A), SAT, CAS, and BSA (except level passes at or above 1000 feet). Depending on unit tasking, the SQ/CC may add sorties and events to the demanding sortie list.

**Nondemanding sortie**— A sortie that provides the aircrew with the opportunity to regain basic flying proficiency without excessively tasking those skills unused during the nonflying period. Authorized sorties and events flown for or on a nondemanding sortie include instruments, AHC, formation, LLNAV at or above 1000 feet AGL, and level weapons deliveries at or above 1000 feet AGL.

**Low Altitude Training (LOWAT)**— A LOWAT event involves performing realistic, mission-oriented low altitude operations. LOWAT events are divided into two categories, LOW ALT

and LOW A/A. This tactical training does not apply to traffic pattern operations or other basic transitions through the low-altitude structure.

**Low Altitude (LOW ALT)**— An event defined by performing realistic, mission-oriented low altitude operations while below 1000' AGL. The event includes low altitude navigation and/or tactical formation, air-to-surface attacks, and defensive maneuvering to avoid or negate surface-to-air threats.

**Low Air—to-Air (LOW A/A)** — An event defined as performing realistic mission-oriented air-to-air operations while below 5000' AGL. The event includes skills necessary to search for an aerial target while at low altitude (down to 500' AGL) and then engage offensively or react defensively.**Aircraft handling characteristics (AHC)**—Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints, that includes (but is not limited to) high or maximum angle of attack maneuvering, energy management, minimum time turns, maximum or optimum acceleration, deceleration techniques, and confidence maneuvers (AFI 11-214, *Air Operations Rules and Procedures*).

**Basic aircraft qualification (BAQ)**—An aircrew member who has satisfactorily completed training prescribed to maintain the skills necessary to perform aircrew duties in the unit aircraft. (AFI 11-202, Vol. 1)

**Cockpit familiarization trainer**—A training device in which the controls, switches, and instruments do not have to respond to trainee inputs. Used for checklist use, normal procedures, and emergency procedures.

**Continuation training (CT)**—The program that provides crew members with the volume, frequency, and mix of training necessary to maintain proficiency in the assigned qualification level.

**Currency**—A measure of how frequently and/or recently a task is completed. Currency requirements should ensure the average aircrew member maintains a minimum level of proficiency in a given event.

**(Added) (AETC) Demanding sortie**— A sortie that tasks the aircrew to the extent that flying frequency and continuity are most critical. Sorties and events requiring demanding sortie currency include ACBT ((D)BFM, (D)ACM, (D)ACT), LOWAT (LOW ALT, LOW A/A), SAT, CAS, and BSA (except level passes at or above 1000 feet). Depending on unit tasking, the SQ/CC may add sorties and events to the demanding sortie list.

**Emergency procedures evaluation (EPE)**—An evaluation of aircrew knowledge and responsiveness to critical and noncritical emergency procedures (EP) conducted by a stan/eval flight examiner orally or in a cockpit training device.

**Experienced**—Aircrew who meet the experience qualifications defined in MAJCOM supplements (see inexperienced).

**Flight lead**—As designated on flight orders, the individual responsible for overall conduct of the mission from preflight preparation and briefing to postflight debriefing, regardless of his or her actual position within the formation. A certified four-ship flight lead may lead formations and missions in excess of four aircraft unless restricted by the unit commander. A two-ship flight lead may lead an element in a larger formation.

**Formal course**—Training courses listed in Air Force ETCA.

**Inexperienced**—Aircrew who do not qualify as experienced or are not certified as such by the squadron commander (see experienced).

**Initial qualification**—An aircrew member engaged in training needed to qualify for basic aircrew duties in an assigned position for a specific aircraft, without regard for the unit's operational mission.

**Initial qualification training (IQT)**—Training needed to qualify for basic aircrew duties in an assigned position for a specific aircraft, without regard for the unit's operational mission. This training is the minimum requirement for BAQ.

**(Added) (AETC)Low Altitude (LOW ALT)**— An event defined by performing realistic, mission-oriented low altitude operations while below 1000' AGL. The event includes low altitude navigation and/or tactical formation, air-to-surface attacks, and defensive maneuvering to avoid or negate surface-to-air threats.

**Low altitude training**—Mission-oriented operations in the certified low-altitude block (500 feet to 1,000 feet AGL).

**(Added) (AETC)Low Altitude Training (LOWAT)**— A LOWAT event involves performing realistic, mission-oriented low altitude operations. LOWAT events are divided into two categories, LOW ALT and LOW A/A. This tactical training does not apply to traffic pattern operations or other basic transitions through the low-altitude structure.

**Low—level navigation**—Visual flight rules point-to-point navigation in the 500 to 5,000 feet AGL altitude block.

**Mission qualification**—An aircrew member engaged in training to qualify in an assigned aircrew position to perform a command or unit mission.

**Night**—The time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time (AFI 11-202, Volume 3).

**Night landing**—A landing conducted between the end of evening civil twilight and the beginning of morning civil twilight.

**Night sortie**—A sortie in which either a takeoff or a landing and at least 50 percent of flight duration is accomplish between the end of evening twilight and the beginning of morning civil twilight.

**(Added) (AETC)Nondemanding sortie**— A sortie that provides the aircrew with the opportunity to regain basic flying proficiency without excessively tasking those skills unused during the nonflying period. Authorized sorties and events flown for or on a nondemanding sortie include instruments, AHC, formation, LLNAV at or above 1000 feet AGL, and level weapons deliveries at or above 1000 feet AGL.

**Office of primary responsibility (OPR)**—The headquarters, agency, or activity having the primary functional interest in and responsibility for a specific action, project, plan, program, or problem.

**Operational flight trainer**—A training device that dynamically simulates flight characteristics. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training.

**Proficiency**—A measure of how well a task is completed. Aircrew members are considered proficient when they can perform tasks at the minimum acceptable levels of speed, accuracy, and safety (AFI 11-202, Volume 1).

**Squadron supervisor**—For the purposes of this instruction, the squadron commander, operations officer, assistant operations officer, flight commander, or weapons officer.

**Attachment 2 (Added-AETC)****FUNCTIONAL CHECK FLIGHT (FCF) PROGRAM****A2.1. (Added-AETC) The OG/CC. The OG/CC will:**

A2.1.1. **(Added-AETC)** Designate one pilot as the chief of the FCF section and one pilot as the T-38 lead FCF pilot. The chief FCF pilot will be assigned to the operations group and the lead FCF pilots should be assigned to the operations group at the discretion of the OG/CC.

A2.1.2. **(Added-AETC)** Determine the number of additional duty FCF pilots required.

A2.1.3. **(Added-AETC)** Squadron-assigned additional duty FCF pilots and FCF instructors will be appointed by a memorandum from the OG/CC.

**A2.2. (Added-AETC) The Chief FCF Pilot. The chief FCF pilot will:**

A2.2.1. **(Added-AETC)** Work closely with maintenance quality assurance personnel.

A2.2.2. **(Added-AETC)** Maintain an FCF operational information file (OIF) in the FCF briefing areas. (The FCF OIF will not duplicate the flight crew information file [FCIF].)

A2.2.3. **(Added-AETC)** Develop an FCF CT program for FCF techniques and procedures to include seminars and flights. The objective is to ensure FCF crews maintain a high level of proficiency and knowledge of maintenance requirements to produce a quality aircraft for mission accomplishment.

A2.2.4. **(Added-AETC)** Monitor FCF pilot CT requirements.

A2.2.5. **(Added-AETC)** Act as a liaison member of the wing stan/eval division.

A2.2.6. **(Added-AETC)** Ensure local flight clearance is coordinated with air traffic control agencies.

**Attachment 3 (Added-AETC)**  
**T-38 AIRCREW CURRENCIES**

**Table A3.1. (Added) T-38 Aircrew Currencies.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
		<b>Currency (Days) (I/E)</b>	<b>Required to Update</b>	<b>Notes</b>
<b>1</b>	Landing		Accomplish a day or night landing from either seat	1
<b>2</b>	Instrument Approach	30/45	Accomplish an instrument approach from the IAF or radar vectors to landing or missed approach.	2, 3
<b>3</b>	RCP Landing (IPs only)		Perform a day or night landing from the RCP.	4
<b>4</b>	RCP Night Landing (IPs only)	90/90	Perform a night landing from the RCP.	4, 5
<b>5</b>	Formation Takeoff	60/90	Perform a formation takeoff as lead or wingman (interval takeoffs do not update currency).	
<b>6</b>	Formation Landing		Perform a formation landing as lead or wingman.	4
<b>SUPT, ENJJPT, and PIT</b>				
<b>7</b>	Student Instructional Sortie	30/60	Complete an SUPT, ENJJPT, ENJJPT PIT, or PIT syllabus-directed mission, or as a flight examiner on an evaluation.	6
<b>8</b>	Stall Recognition/Recovery	120/180	Perform a minimum of one full aft stick stall, and a minimum of one turning and one landing attitude approach to stall.	
<b>9</b>	Low Level	90/120	Fly or instruct route entry or exit and at least 2 legs of an MTR.	
<b>IFF Only</b>				
<b>10</b>	Student Instructional Sortie (MR Pilots/WSOs only)	30/60	Complete an IFF or UIP syllabus-directed student mission as the IP of record or as the direct support flight lead; or as a flight examiner on an evaluation.	6

<b>I</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>T</b>		<b>Currency (Days)</b>		
	<b>Maneuver</b>	<b>(I/E)</b>	<b>Required to Update</b>	<b>Notes</b>
<b>11</b>	Student Direct Support Sortie (IFF BMC Pilots only)		Complete an IFF or UIP syllabus-directed student mission as the direct support flight lead	6
<b>12</b>	Demanding Mission	30/45	Perform a demanding mission	7
<b>13</b>	Air Combat Training (ACBT)	60/90	Perform or instruct a (D)BFM, (D)ACM, or (D)ACT event from either cockpit.	8, 9
<b>14</b>	LOW ALT		Perform or instruct a LOW ALT event.	8, 10
<b>15</b>	LOW A/A		Perform or instruct a LOW A/A event	11
<b>16</b>	Weapons Delivery		Perform or instruct a weapons delivery event in either cockpit.	8

**NOTES:**

1. See Paragraph 4.3.3. of the basic AFI for recurrency and requalification requirements. Landing currency affects BAQ status.
2. Non-current pilots will increase their Pilot Weather Category (PWC) by one category. PWC 2 pilots will revert to VFR minimums (1500/3). If regaining with the instructor in the same aircraft, the instructor's weather minimums may be used.
3. Instrument approach currency may be updated on student sorties only when an approach is flown at night, in instrument meteorological conditions, or with / in formation with another rated pilot/WSO.
4. Updates landing currency.
5. IPs maintaining night RCP landing currency only. To regain RCP night landing currency, three night landings must be accomplished from the RCP and the FCP IP must be qualified in FCP and RCP night landings.
6. See paragraph 4.4.2 to regain currency (includes IFF BMC pilots)
7. Regain currency by performing a non-demanding mission or performing a demanding mission with an IP in the aircraft.
8. Regain currency by performing event in the FCP (supervised IAW 4.3.2.).
9. This currency is not required for BMC IFF pilots that have a mission evaluation in air-to-ground sorties, i.e., not qualified for air-to-air missions.

10. This currency is not required for BMC IFF pilots that have a mission evaluation in air-to-air sorties, i.e., not qualified for air-to-ground missions.

11. Regain currency with a qualified instructor in the RCP. Waiver authority is 19 AF/DO. Recurrency requires satisfactory performance in the following events below 1000' AGL: vertical awareness, training, hard turns, tactical formation, and offensive/defensive maneuvering.

**Attachment 4 (Added-AETC)****BUDDY INSTRUCTOR PILOT (BIP) PROGRAM**

**A4.1. (Added-AETC) Overview.** The AETC BIP program formalizes and standardizes the training a new IP accomplishes from PIT graduation to be designated "experienced." This program applies to JSUPT and ENJJPT undergraduate flying training units.

**A4.2. Program Administration:**

A4.2.1. **(Added-AETC)** Following MQT, each new IP will be assigned to a highly qualified BIP who will monitor the new IP's performance and provide guidance in all areas of job requirements until the new IP has instructed through each category of training. NOTE: Key wing personnel (wing commanders, wing vice commanders, OG/CCs, and OG/CVs) are exempt from this program.

A4.2.2. **(Added-AETC)** SQ/CCs should tailor each individual's BIP program and provide additional training as required. Because of the different experiences of new IPs, two different BIP courses are available—long and short. SQ/CCs will designate which program each new IP will enter, based on the new IP's PIT performance, MQT, and previous experience, as follows:

A4.2.2.1. **(Added-AETC)** The BIP long program expands on the short program and is mandatory for FAIPs and recommended for individuals who have not instructed or have limited major weapon system (MWS) experience. Minimum training requirements for the BIP long program are prescribed in paragraphs A4.4 (Added) through paragraph A4.4.4 (Added).

A4.2.2.2. **(Added-AETC)** The BIP short program is for new IPs with previous instructor experience or extensive MWS experience. Minimum training requirements for the BIP short program are prescribed in paragraph A4.5 (Added) through paragraph A4.5.4 (Added).

**A4.3. (Added-AETC) Squadron Responsibilities:**

A4.3.1. **(Added-AETC)** The SQ/CC will:

A4.3.1.1. **(Added-AETC)** Set squadron BIP policies and guidance.

A4.3.1.2. **(Added-AETC)** Brief new IPs on BIP policies and responsibilities before the new IP flies with students. **NOTE:** The squadron operations officer may conduct this briefing in the absence of the SQ/CC.

A4.3.1.3. **(Added-AETC)** Review completed BIP documentation and certify that new IPs have completed the BIP program.

A4.3.2. **(Added-AETC)** The squadron DO or ADO will:

A4.3.2.1. **(Added-AETC)** Monitor all aspects of the BIP program.

A4.3.2.2. **(Added-AETC)** Chair a monthly CT meeting for IPs in the BIP program. The regularly scheduled quarterly CT meeting fulfills the requirement for that month's meeting.

A4.3.2.3. **(Added-AETC)** Review completed BIP documentation prior to the SQ/CC's review.

A4.3.3. **(Added-AETC)** The flight commander will:

A4.3.3.1. **(Added-AETC)** Supervise overall scheduling, training, and progress of the flight BIP program.

A4.3.3.2. **(Added-AETC)** Recommend an individually tailored BIP training program to the SQ/CC, based on the new IP's past performance and experience.

A4.3.3.3. **(Added-AETC)** Brief each new IP on flight policies, techniques, grading practices, and other applicable topics before he or she conducts student training. **Note:** The assistant flight commander may conduct this briefing in the absence of the flight commander.

A4.3.3.4. **(Added-AETC)** Fly at least one sortie with each new IP in the BIP program. **Note:** The assistant flight commander may fly this sortie in the absence of the flight commander.

A4.3.3.5. **(Added-AETC)** Verify that new IPs have met all BIP requirements before sending documentation up the chain of command for review.

A4.3.4. **(Added-AETC)** The flight training officer will:

A4.3.4.1. **(Added-AETC)** Maintain all BIP documentation in a BIP folder and forward it to the squadron training officer for review at least once a month.

A4.3.4.2. **(Added-AETC)** Inspect BIP documentation on new IPs who have completed the BIP program and forward the paperwork through the flight commander to the squadron DO.

A4.3.4.3. **(Added-AETC)** Ensure the flight scheduler requests sorties required to meet BIP requirements.

**A4.4. (Added-AETC) BIP Long Program.** This program should last approximately 3 to 6 months (minimum of 3 months). New instructors will accomplish the training requirements listed in paragraphs A4.4.1 (Added) through A4.4.4 (Added). Briefings accomplished during MQT may be used to fulfill these requirements.

A4.4.1. **(Added-AETC) Ground Training.** Ground training consists of the following:

A4.4.1.1. **(Added-AETC)** Squadron policies briefing (before flying with students).

A4.4.1.2. **(Added-AETC)** BIP briefing (before flying with students).

A4.4.1.3. **(Added-AETC)** Instructor responsibilities briefing (before flying with students).

A4.4.1.4. **(Added-AETC)** Commander review (CR) and commander awareness program (CAP) briefing.

A4.4.1.5. **(Added-AETC)** Grading practices briefing.

A4.4.1.6. **(Added-AETC)** Merit Assignment Selection System (MASS) briefing.

A4.4.1.7. **(Added-AETC)** CT requirements briefing.

- A4.4.1.8. **(Added-AETC)** Scheduling briefing.
- A4.4.1.9. **(Added-AETC)** Training Integration Management System (TIMS), and Graduate Training Integration Management System (GTIMS) briefings.
- A4.4.1.10. **(Added-AETC)** Gradebook briefing.
- A4.4.1.11. **(Added-AETC)** Flying safety briefing.
- A4.4.1.12. **(Added-AETC)** Stan/eval briefing.
- A4.4.1.13. **(Added-AETC)** Check section briefing.
- A4.4.1.14. **(Added-AETC)** Monitoring a check flight ground evaluation.
- A4.4.1.15. **(Added-AETC)** Runway supervisory unit (RSU) briefing.
- A4.4.1.16. **(Added-AETC)** Monitoring an RSU tour of duty.
- A4.4.1.17. **(Added-AETC)** EP or CRM simulator with a simulator instructor.
- A4.4.1.18. **(Added-AETC)** Graduation evaluation program briefing.
- A4.4.1.19. **(Added-AETC)** Open-book syllabus test (locally generated).
- A4.4.1.20. **(Added-AETC)** Open-book course training standards (CTS) test (locally generated).

A4.4.2. **(Added-AETC) Flying Training.** The flying training portion of the BIP program consists of BIP sorties and sponsor sorties, as follows:

A4.4.2.1. **(Added-AETC) BIP Sorties.** BIP sorties are those flown by the buddy IP with the new IP. All BIP sorties will be flown with the assigned buddy IP, flight unit stan/eval monitor (USEM), or any supervisor (assistant flight commander or above) in the new IP's chain of command. The objective of these flights is to further develop the new IP's flying proficiency and instructional techniques. On each BIP sortie, the buddy IP will discuss instructional techniques, planning profiles, student progress, grading practices, local flying policies, common student errors, and possible pitfalls the new IP should avoid. The buddy IP will document these sorties in the new IP's BIP record. At least one BIP sortie will be flown in each of the following categories of training:

A4.4.2.1.1. **(Added-AETC)** Contact/Transition.

A4.4.2.1.2. **(Added-AETC)** Two-ship formation.

A4.4.2.1.3. **(Added-AETC)** Four-ship formation.

A4.4.2.1.4. **(Added-AETC)** Instrument and navigation. The program will include a cross-country mission consisting of at least four sorties and one remain overnight (RON) stop. Sorties will use airfields typically used for student cross-country missions or airfields that have unusual operational procedures or environments. The BIP cross-country sortie must be flown prior to the new IP flying a student cross-country and emphasize procedures and techniques for instrument cross-country training.

A4.4.2.1.5. **(Added-AETC)** Low-level sortie. This sortie may be flown as one leg of the cross-country.

A4.4.2.2. **(Added-AETC) Sponsor Sorties.** The BIP, flight USEM, or any supervisor (assistant flight commander or above) in the new IP's chain of command will fly sponsor sorties with the new IP's students to ensure they are being taught proper techniques. New IPs will fly a series of sorties (three contact/transition, two instruments/navigation, and three formation) with the same student, after which the BIP will fly with that student. The BIP will provide feedback to the new IP (within 2 workdays) on instructional techniques and grading practices. Document all sponsor sorties and debriefings in the new IP's BIP training record.

A4.4.3. **(Added-AETC) Initial Student Sorties.** Before the new IP flies any pre-solo student sorties, he or she will complete a minimum of three sorties with a post-solo student (in any category of training). The buddy IP will document these sorties in the IP's BIP record.

A4.4.4. **(Added-AETC) Student Solo.** Prior to the new IP soloing his or her first student, someone in the BIP chain of command will fly one of the last four sorties before the student's initial solo. This sortie will not be the last sortie prior to initial solo. The buddy IP will document this sortie in the IP's BIP record.

**A4.5. (Added-AETC) BIP Short Program.** The BIP short program lasts approximately 1 to 3 months and is designed for the new IP who has come from an MWS with previous instructor experience. After MQT and before accomplishing any student sorties, the new IP will obtain a briefing from the SQ/CC regarding his or her instructor responsibilities. During the briefing, the SQ/CC will sign the new IP's letter of appointment and BIP track letter. (**Note:** In the SQ/CC's absence, the squadron DO will accomplish this brief.) Short program training will be accomplished as follows:

A4.5.1. **(Added-AETC) Ground Training.** New instructors will accomplish the ground training requirements listed in the BIP long program (paragraphs A4.4.1 (Added) through A4.4.1.20 (Added)).

A4.5.2. **(Added-AETC) Flying Training.** The flying training portion of the BIP program consists of BIP sorties and sponsor sorties, as follows:

A4.5.2.1. **(Added-AETC) BIP Sorties.** BIP sorties are those flown by the buddy IP with the new IP. All BIP sorties will be flown with the assigned buddy IP, flight USEM, or any supervisor (assistant flight commander or above) in the new IP's chain of command. The objective of these flights is to further develop the new IP's flying proficiency and instructional techniques. At least one BIP sortie will be flown. It may be in any category of training (for example, contact/transition, instruments, formation, or navigation). On the BIP sortie, the buddy IP will discuss instructional techniques, planning profiles, student progress, grading practices, pitfalls the new IP should avoid, local flying policies, and common student errors. The buddy IP will document all sorties and debriefings in the new IP's BIP record.

A4.5.2.2. **(Added-AETC) Sponsor Sorties.** The buddy IP, flight USEM, or any supervisor (assistant flight commander or above) in the new IP's chain of command will fly sponsor sorties with the new IP's students to ensure they are being taught proper techniques. At least one sponsor sortie will be flown (in any category of training) after the student has had sufficient exposure to be influenced by the new IP's techniques. The buddy IP will document all sorties and debriefings in the new IP's BIP record.

**A4.6. (Added-AETC) BIP Program Certification.** After the new IP completes all of the ground and flying training events, the squadron commander will certify program completion. The buddy IP will place the BIP training records in the new IP's training folder.

**Attachment 5 (Added-AETC)****INTRODUCTION TO FIGHTER FUNDAMENTALS (IFF) TRAINING**

**A5.1. (Added-AETC) Air-to-Ground Weapons Deliveries.** Weapons delivery training conducted during formal training will follow the appropriate syllabus. CT air-to-ground weapons deliveries will be according to the appropriate syllabus or tactical simulations. To the maximum extent possible, basic surface attack (BSA) training will be accomplished on a Class A range.

A5.1.1. **(Added-AETC)** The following events and parameters form the basic framework for air-to-ground weapons delivery training:

A5.1.1.1. **(Added-AETC)** Visual Level Delivery (VLD) is a delivery with less than 5 degrees of climb or dive at weapons release (nonmaneuvering), using any means of delivery with visual target acquisition or designation. Minimum altitude is that required for safe separation from the ordnance being delivered or simulated or 100 feet AGL, whichever is higher. Hit criteria are 250 feet (76 meters) or within target area for manual bombs, and 130 feet (40 meters) for constantly computed impact point (CCIP) bombs.

A5.1.1.2. **(Added-AETC)** Low Angle High Drag (LAHD). Planned dive angle is less than 30 degrees. Minimum recovery altitude is safe escape from the ordnance being simulated or delivered, as required to recover above 100 feet AGL (300 feet AGL on a Class B/C or over-water range) or one-half the computed altitude loss from bomb release to recovery, whichever is higher. Hit criteria are 105 feet (32 meters) or within the target area for manual bombs, and 75 feet (23 meters) for CCIP bombs.

A5.1.1.3. **(Added-AETC)** Low Angle Low Drag (LALD). Planned dive angle is less than 30 degrees.

Minimum recovery altitude is safe escape from the ordnance being simulated or delivered or as required to recover above 1,000 feet AGL, whichever is higher. Hit criteria are 175 feet (53 meters) for manual bombs, and 100 feet (30 meters) for CCIP bombs.

A5.1.1.4. **(Added-AETC)** Dive Bomb (DB). Planned dive angle is 30 degrees or greater. Minimum recovery altitude is safe escape from the ordnance being simulated or delivered or as required to recover above 1,500 feet AGL, whichever is higher. Hit criteria are 145 feet (44 meters) for manual bombs, and 85 feet (26 meters) for CCIP bombs.

A5.1.1.5. **(Added-AETC)** High Altitude Dive Bomb (HADB). Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 4,500 feet AGL. Hit criteria are 125 feet (38 meters) for both manual and CCIP bombs.

A5.1.1.6. **(Added-AETC)** Low Angle Strafe (LAS). Planned dive angle is 15 degrees or less. The foul line is 2,000 feet and minimum recovery altitude is 75 feet AGL.

A5.1.1.7. **(Added-AETC)** High Angle Strafe (HAS). Planned dive angle is greater than 15 degrees. Minimum recovery altitude is 1000 feet AGL.

A5.1.1.8. **(Added-AETC)** Long Range Strafe (LRS). Planned dive angle is 15 degrees or less. Minimum recovery altitude is 75 feet AGL. Open fire range is IAW range restrictions. Cease fire range is 5,000 feet for computed delivery. Hit criteria: 2 frames of A-10 gunsight piper on the target during employment.

A5.1.2. **(Added-AETC)** Additional references:

T.O. 1T-38A-1, *Flight Manual USAF Series T-38 Aircraft, 15 April 2010*

TO 1T-38C-1, *Flight Manual USAF Series T-38C Aircraft, 15 June 2008*

TO 1T-38A-34-1-1 or 1T-38C-34-1-1, *Weapons Delivery Manual, 15 May 2006*

AFI 11-2T-38, *VOLUME 3, T-38 Operations Procedures, 29 June 2007*

AFI 11-214, *Air Operations Rules and Procedures, 22 December 2005*

AETC Tactics, Techniques, and Procedures 11-1, *Employment Fundamentals T-38C/IFF, 4 September 2009*

### **A5.2. (Added-AETC) Air-to-Air Weapons Employment**

A5.2.1. **(Added-AETC)** All air-to-air weapons employment conducted during formal training will follow the appropriate syllabus. CT air-to-air weapons employment will be according to the appropriate syllabus or tactical simulations as determined by the squadron.

A5.2.2. **(Added-AETC)** Additional references:

T.O. 1T-38A-1, *Flight Manual USAF Series T-38 Aircraft, 15 April 2010*

TO 1T-38C-1, *Flight Manual USAF Series T-38C Aircraft, 15 June 2008*

TO 1T-38A-34-1-1 or 1T-38C-34-1-1, *Weapons Delivery Manual, 15 May 2006*

AFI 11-2T-38, *VOLUME 3, T-38 Operations Procedures, 29 June 2007*

AFI 11-214, *Air Operations Rules and Procedures, 22 December 2005*

AETC Tactics, Techniques, and Procedures 11-1, *Employment Fundamentals T-38C/IFF, 4 September 2009*

**A5.3. (Added-AETC) Weapons and Tactics Academic Training.** Units will establish a weapons and tactics academic training program to satisfy CT requirements. The program requires successful completion of an examination (85 percent minimum to pass) once per training cycle. Instruction and tests should include the following (as applicable), but are not limited to:

A5.3.1. **(Added-AETC)** Conventional air-to-surface employment and tactics.

A5.3.2. **(Added-AETC)** ACBT. Principles of aerodynamics, maneuverability, AHC formations, visual lookout capability (VLC), radio terminology (RT), tactical intercept principles, use of ground control intercept (GCI) or airborne warning and control system (AWACS), and adversary capabilities are addressed.

A5.3.3. **(Added-AETC)** A low-altitude flying academics review in accordance with paragraph A5.5.2.4 (Added) and paragraph A5.5.3.4 (Added) through paragraph A5.5.3.4.4.3 (Added).

**A5.4. (Added-AETC) Flying Training.** Off-station CT will support AETC FTUs to the maximum extent practical. Squadron supervisors must balance the need for FTU support with limited resources, programmed flying training (PFT), sortie allocation, and FTU requirements.

**A5.5. Special Mission Training Programs.** Use syllabuses of instruction for upgrades in the following areas: (D)ACM, (D)ACT, SAT/CAS, and LOWAT. The SQ/CC may waive any flying portion of the special mission training. Aircrew will only fly events they are qualified for or as part of an upgrade syllabus leading to qualification. Document all training in the upgrade crewmember's training folder.

**A5.5.1. Supervision.** Flight commanders recommend IFF instructors for upgrade. On completion of the appropriate training syllabus, the SQ/CC will certify qualification. Special Mission certifications must be documented on the letter of Xs.

**A5.5.2. (Added-AETC) Academic Training.** Upgrading crewmembers will complete academics prior to their first flight briefing in the program. The instructor will document this training in the upgrade crewmember's training folder. An instructor qualified in the applicable mission type will teach academics, using AETC TTP 11-1 and the appropriate academic guide. He or she may tailor the academics to meet the individual's needs based on previous experience, as follows:

**A5.5.2.1. (Added-AETC) Air Combat Maneuvering (ACM).** Communications (directive or descriptive commentary); formation and visual lookout (mutual support); element employment against a single bandit; engaged and support fighter responsibilities; initial moves; engaged maneuvering (techniques and problems); flight management (setups); midair deconfliction; training rules (AFI 11-214, *Aircrew, Weapons Director, and Terminal Attack Controller Procedures for Air Operations*); flight lead and instructor responsibilities and techniques; training objectives, briefing, flight management, and debriefing; and squadron policies and commander interest items.

**A5.5.2.2. (Added-AETC) Air Combat Tactics (ACT).** Communication plan; scenarios and mission type (offensive counter-air [OCA], defensive counter-air [DCA], adversary tactics); T-38 specifics (traffic collision avoidance system [TCAS], air-to-air [A/A] tactical air navigation [TACAN]), Introduction to Fighter Fundamentals (IFF), engine envelope, flight deconfliction); formations; element maneuvering and mutual support; adversary tactics; low-altitude considerations (formation, navigation, offensive and defensive maneuvering); AWACS and GCI procedures (capabilities and limitations); tactical game plan (targeting, engagement considerations, flow plan, deconfliction, and midair collision potential); flight lead and instructor responsibilities and techniques (objectives, briefing, flight management, and debriefing); training rules (AFI 11-214); DTC, bullseye (B/E); and squadron policies; and commander interest items.

**A5.5.2.3. (Added-AETC) Close Air Support (CAS) and Surface Attack Tactics (SAT).** Planning considerations (threat, terrain, etc.); low-level map preparation (minimum enroute altitude [MEA] selection, chart update manual [CHUM] requirements); route abort procedures (VMC/IMC contingencies, rendezvous techniques); low-altitude tactical formation (LATF); low-altitude tactical navigation (LATN); low-altitude threat reactions; enemy defense capabilities; weapons selection (munitions types, effectiveness, fusing, etc.); holding; initial contact techniques; target attack options (low, medium, and high altitude); coordinated two-ship attack options

(target deconfliction plan); re-attack options and techniques; target area egress, rendezvous techniques, and deconfliction; radio procedures (authentication, joint terminal air controller [JTAC]/forward air controller airborne [FAC(A)] brief, fighter-to-fighter); flight lead and instructor responsibilities and techniques (objectives, briefing, flight management, and debriefing); training rules (AFI 11-214); and squadron policies; and commander interest items.

A5.5.2.4. **(Added-AETC) LOWAT (LOW A/A)**. AHC (low altitude, fuel consumption, maneuvering, terrain avoidance, turning); environmental factors; task management; LATN; LATF; defensive reactions; factors affecting low-level awareness; training rules (AFI 11-214); low-altitude A/A employment (level, low-to-high, and high-to-low intercepts and conversion aborts); squadron policies; and commander interest items.

A5.5.3. **(Added-AETC) Flying Training**. IPs will occupy the cockpit from which they can best monitor the mission in accordance with the following outline:

A5.5.3.1. **(Added-AETC) Air Combat Maneuvering (ACM)**. The objective is to qualify an IFF pilot to fly as an ACM wingman, flight lead, and instructor (for student IFF and CT ACM sorties). Any ACM-qualified flight lead may fly as the bandit. With SQ/CC approval, ACM wingmen may fly as the bandit. Emphasize engaged and support responsibilities and role exchanges, directive and descriptive communications, engaged/support maneuvering, mutual support, weapons employment considerations, quick kills, and separations. Setups will include defensive, high aspect, and beyond visual range (BVR) engagements.

A5.5.3.1.1. **(Added-AETC) ACM-1 (Wingman) and ACM-4 (Flight Lead)**. *Mission Objectives*: Introduce and practice two versus (v) one element maneuvering from defensive and high aspect positions. For ACM-1 (Wingman), all ACM engagements flown on an IFF student ACM-1 and ACM-2 sortie profile will be flown (UIP will fly the engaged and support roles). ACM-4 (Flight Lead) will fly a mix of ACM engagements flown on a typical IFF ACM student mission. *Mission Tasks*: CRM tasks, briefing (flight lead only), communications - directive/descriptive, engaged/support maneuvering, mutual support, weapons employment, separations, and debriefing (flight lead only).

A5.5.3.1.2. **(Added-AETC) ACM-2 (Wingman)**. *Mission Objectives*: Practice two v one element maneuvering from defensive, high aspect, and BVR positions. Required ACM engagements not accomplished on ACM 1 (Wingman) will be accomplished prior to flying BVR setups. *Mission Tasks*: CRM tasks, communications - directive/descriptive, engaged/support maneuvering, mutual support, weapons employment, separations.

A5.5.3.1.3. **(Added-AETC) ACM-3 (Wingman) and ACM 5 (Flight Lead)**. *Mission Objectives*: Certify two v one element maneuvering. *Mission Tasks*: CRM tasks, briefing (flight lead only), communications - directive/descriptive, engaged/support maneuvering, mutual support, weapons employment, separations, and debriefing (flight lead only).

A5.5.3.1.4. **(Added-AETC) ACM-6 (Instructor).** *Mission Objective:* Practice briefing, leading, instructing and debriefing an IFF ACM student mission as flight lead and instructor. Practice two v one element maneuvering. *Mission Tasks:* CRM tasks, briefing, communications - directive/descriptive, engaged maneuvering, mutual support, weapons employment, separations, and debriefing.

A5.5.3.1.5. **(Added-AETC) ACM-7 (Instructor).** *Mission Objective:* Certify two v one element maneuvering. Successful completion of ACM-7 results in certification as an IFF student ACM instructor (SQ/CCs may designate CT ACM IPs at their discretion). *Mission Tasks:* CRM tasks, briefing, communications – directive/descriptive, engaged/support maneuvering, mutual support, weapons employments, separations, and debriefing.

A5.5.3.2. **(Added-AETC) Air Combat Tactics (ACT).** The objective is to qualify an IFF pilot to fly as an ACT wingman, flight lead, and instructor. Pilots will not fly ACT sorties until ACM certification (i.e., must be ACM Wingman certified prior to flying ACT Wingman sorties, ACM FL certified prior to ACT FL sorties, etc). Individuals will not go below 5,000 feet AGL unless they are LOW A/A certified and current. Following ACT flight lead certification, Sq/CCs may certify instructors as ACT mission commanders who were mission commander's in a previous MDS. Reference the applicable volume of AFTTP 3-1, *Mission Employment*, when planning adversary tactics. Emphasize mutual support within and between elements. Plans should also include lateral and altitude deconfliction.

A5.5.3.2.1. **(Added-AETC) ACT-1 (Wingman).** *Mission Objectives:* Introduce and practice ACT employment. *Mission Tasks:* CRM tasks, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, and weapons employment.

A5.5.3.2.2. **(Added-AETC) LOW A/A (Certification).** May be flown in conjunction with any ACT upgrade sortie. Completion of LASDT-3 is required prior to LOW A/A certification. Requires qualified instructor in the RCP and satisfactory performance in the following events below 1000' AGL: vertical awareness, training, hard turns, tactical formation, and offensive/defensive maneuvering.

A5.5.3.2.3. **(Added-AETC) ACT-2 (Wingman).** *Mission Objective:* Certify ACT employment. *Mission Tasks:* CRM tasks, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, and weapons employment.

A5.5.3.2.4. **(Added-AETC) ACT-3 (Flight Lead).** *Mission Objectives:* Introduce and practice ACT employment. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

A5.5.3.2.5. **(Added-AETC) ACT-4 (Flight Lead).** *Mission Objectives:* Practice ACT employment. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing

A5.5.3.2.6. **(Added-AETC) ACT-5 (Flight Lead).** *Mission Objective:* Certify ACT employment. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

A5.5.3.2.7. **(Added-AETC) ACT-6 (Instructor).** *Mission Objective:* Certify ACT instruction. *Mission Tasks:* Briefing, tactics and game plan (including deconfliction), engaged maneuvering, mutual support, weapons employment, and debriefing.

A5.5.3.3. **(Added-AETC) Close Air Support (CAS):** The objective is to qualify an IFF pilot to fly as a CAS wingman, flight lead, and instructor.

A5.5.3.3.1. **(Added-AETC) CAS-1 (Wingman) and CAS-4 (Flight Lead).** *Mission Objectives:* Introduce and practice medium- and high-altitude tactics. *Mission Tasks:* Briefing (flight lead only), tactics and game plan, coordinated attacks, mutual support; weapons employment, and debriefing (flight lead only).

A5.5.3.3.2. **(Added-AETC) CAS-2 (Wingman) and CAS-5 (Flight Lead).** *Mission Objectives:* Introduce and practice low-altitude tactics. *Mission Tasks:* Briefing (flight lead only), tactics and game plan, coordinated attacks, mutual support, weapons employment, and debriefing (flight lead only).

A5.5.3.3.3. **(Added-AETC) CAS-3 (Wingman), CAS-6 (Flight Lead), and CAS-7 (Instructor).** *Mission Objective:* Certify CAS procedures. *Mission Tasks:* Briefing (flight lead only), tactics and game plan, coordinated attacks, mutual support, weapons employment, and debriefing (flight lead only).

A5.5.3.4. **(Added-AETC) Surface Attack Tactics (SAT).** The objective is to qualify an IFF pilot to fly as a SAT instructor (for student IFF SAT sorties). IPs can be entered into the SAT upgrade at the completion of CAS-6 (Flight Lead). The following SAT sorties are not required for IPs to instruct on a student WSO SAT sortie.

A5.5.3.4.1. **(Added-AETC) SAT-1 (RCP IP)** *Mission Objectives:* Introduce IFF medium altitude SAT. *Mission Tasks:* Observe instructional brief/debrief, fly sortie as RCP IP.

A5.5.3.4.2. **(Added-AETC) SAT-2 (RCP IP)** Low Altitude *Mission Objectives:* Introduce IFF low altitude SAT. *Mission Tasks:* Observe instructional brief/debrief, fly sortie as RCP IP.

A5.5.3.4.3. **(Added-AETC) SAT-3 (Instructor)** *Mission Objectives:* Certify instruction on a medium altitude IFF student SAT sortie. *Mission Tasks:* Briefing, tactics and game plan, TACS coordination, medium altitude tactics, tactical holding, target ID, 2-ship tactics with mutual support maneuvering, weapons delivery, in-flight report, debriefing. **Note:** Pre-requisite is SAT-1 (RCP IP).

A5.5.3.4.4. **(Added-AETC) SAT-4 (Instructor)** *Mission Objectives:* Certify instruction on a low altitude IFF student SAT sortie. Successful completion of SAT-4 results in certification as an IFF student SAT instructor. *Mission Tasks:* Briefing, tactics and game plan, TACS coordination, low altitude tactics, tactical holding, target ID, 2-ship tactics with mutual support maneuvering, weapons delivery, in-flight report, debriefing. **Note:** Pre-requisite is SAT-2 (RCP IP) and SAT-3 (Instructor).

A5.5.3.5. **(Added-AETC) Low-Altitude Step-Down Training (LASDT).** To conduct low-altitude operations safely, aircrew need to be knowledgeable of aircraft handling and performance characteristics, formation, and navigation in the low-altitude environment. This environment requires a well-supervised LASDT program, including initial certification and currency requirements. This program incrementally qualifies IFF crewmembers to conduct LOW ALT down to 500 feet AGL.

A5.5.3.5.1. **(Added-AETC) Entry into LASDT** requires SQ/CC approval. Crewmembers that completed the T-38C/IFF Instructor Qualification syllabus are considered LOW ALT qualified.

A5.5.3.5.2. **(Added-AETC) LASDT** will be scheduled and briefed as the primary portion of the mission. It will not be flown as an alternate mission. Instructors and flight leads must be aware of the added stress and task-loading associated with low-altitude operations. Training profiles will be developed to avoid over-tasking the upgrading crewmember, and upgrade sortie continuity should be emphasized.

A5.5.3.5.3. **(Added-AETC) Academic Training.** The following academic outline is applicable to all LASDT. All academic training will be completed prior to flight training and briefing:

A5.5.3.5.3.1. **(Added-AETC) AHC.** A discussion of aircraft performance as it applies to the low-altitude environment, to include control response (low and high speed, over-G potential, speed brake use); afterburner (fuel considerations, selection techniques); acceleration and deceleration; level turns, vertical maneuvering, climb, dive, and slice, recoveries, effects of gross weight, power settings, density altitude, G-loading, and bank angles; terrain avoidance (ridge crossings); terrain clearance v turning room, dangers inherent in overbanking during turns, and importance of frequent cross check of aircraft attitude relative to horizon.

A5.5.3.5.3.2. **(Added-AETC) Environmental Factors.** A discussion of out-of-cockpit visibility and field of view (FOV) restrictions, sun angle, terrain and G-excess illusions and perceptions, and weather (WX) considerations.

A5.5.3.5.3.3. **(Added-AETC) Task Management.** A discussion of low-altitude tasks and task management and prioritization.

A5.5.3.5.3.4. **(Added-AETC) LATN.** A discussion of the system's use, low-level (LL) map preparation, dead reckoning, pilotage, etc.

A5.5.3.5.3.5. **(Added-AETC) LATF.** A discussion of formations (including line abreast and wedge), hazards at low altitudes, task prioritization, tactical turns, and visual lookout.

A5.5.3.5.3.6. **(Added-AETC) Low-Level Awareness.** A discussion of factors affecting low-level awareness: airspeeds and maneuverability; formation size and design; formation and crewmember responsibilities; environmental effects on visibility; factors influencing individual proficiency and airmanship; route familiarity and complacency; air turbulence, jet wash, bird strike, and route obstacles; terrain features; planning and CHUM responsibilities; and route abort procedures, techniques, and considerations.

A5.5.3.5.3.7. **(Added-AETC) Special Subjects.** Weather abort procedures and aircraft emergencies.

A5.5.3.5.4. **(Added-AETC) Flying Training.** A qualified, LOW ALT current instructor is required in the aircraft.

A5.5.3.5.4.1. **(Added-AETC) LASDT-1 (Single Ship).** *Mission Objectives:* Demonstrate proficiency in single-ship maneuvering in the low-altitude environment between 5,000 and 1,000 feet AGL. Introduce low-altitude operations down to a minimum altitude of 500 feet AGL. *Specific Mission Tasks:* Low-altitude handling and flying qualities; vertical awareness exercise; climb, dive, and slice maneuvers; nose-low recoveries; attitude awareness maneuvers; G-awareness exercise; low-level navigation; airspeed control; fuel management; low-level turns; maneuvering techniques for level, rolling, and rough terrain; visual lookout; low-altitude awareness; and low-level abort practices. **Note:** At the discretion of the OG/CC, LASDT-1 not required if the upgrading crewmember has previously been certified down to 500 feet AGL in another aircraft.

A5.5.3.5.4.2. **(Added-AETC) LASDT-2 (Single Ship).** *Mission Objective:* Demonstrate proficiency in single-ship maneuvering in the low-altitude environment down to a minimum altitude of 500 feet AGL. *Specific Mission Tasks:* AHC (low-altitude handling and flying qualities, vertical awareness exercise, climb/dive/slice maneuvers; nose low recoveries; attitude awareness maneuvers; G-awareness exercise; low-level navigation; airspeed control; fuel management; low-level turns; terrain maneuvering techniques for level, rolling, and rough terrain; visual lookout; altitude awareness and control; and low-level abort practices. Upon satisfactory completion of this mission, the SQ/CC can certify the crewmember LOW ALT qualified, single ship only. **Note:** LASDT-2 cannot be combined with LASDT-3.

A5.5.3.5.4.3. **(Added-AETC) LASDT-3.** *Mission Objective:* Demonstrate proficiency in 2-ship maneuvering in the low-altitude environment down to a minimum altitude of 500 feet AGL. *Specific Mission Tasks:* Low-altitude handling and flying qualities; vertical awareness exercise; climb, dive, and slice maneuvers; nose-low recoveries; attitude awareness maneuvers; G-awareness exercise; low-level navigation; fuel management; low-level turns; LATF; navigation maneuvering techniques for level, rolling, and rough terrain; visual lookout; altitude awareness and control; weather abort and rejoin practices. On satisfactory completion of this mission, the SQ/CC can certify the crewmember LOW ALT qualified.

**A5.6. (Added-AETC) G-Awareness Continuation Training.** Units will develop a CT program that provides feedback to pilots and imprints a proper L-1 AGSM so that it becomes an integral part of pulling Gs.

A5.6.1. **(Added-AETC)** The basis of this program is to give each FL, SQ supervisor, flight surgeon and, if available, aerospace physiologist the skills needed to evaluate a flight member's AVTR to ensure a proper AGSM is being performed. This program also makes assessment of the AGSM a normal debrief item after every flight. The assessment should be done as a normal part of AVTR assessment while reviewing other tactical portions of the mission.

A5.6.2. **(Added-AETC)** Use the following minimum guidance to implement the unit's program:

A5.6.2.1. **(Added-AETC)** When maneuvers above 5 Gs are anticipated on any particular flight, attention will be given to G-awareness during the flight briefing.

A5.6.2.2. **(Added-AETC)** AGSM technique and assessment will be incorporated into the squadron CT program. Emphasis will be placed on briefing, debriefing, and assessing the L-1 AGSM using the AVTR in the debrief on a daily basis. FLs, IPs, SQ supervisors, and flight surgeons should become adept at assessing and teaching the correct AGSM. Academics will include a discussion of the limitations imposed on aircraft performance as a result of an ineffective AGSM.

A5.6.2.3. **(Added-AETC)** The G-awareness exercise will be flown IAW the guidance in AFI 11-2T-38V3.

A5.6.2.4. **(Added-AETC)** FLs will assess the AGSM effectiveness of flight members during mission debriefings. This assessment should not be limited to the G-awareness exercise. Evaluate the AGSM after the pilot has had the time to fatigue to get an accurate assessment of a pilot's AGSM during a tactically and G-demanding portion of flight.

A5.6.3. **(Added-AETC)** IPs or SQ supervisors will identify pilots having poor AGSM technique or low G-tolerance to the Flt/CC or appropriate operations supervisor. The SQ/DO or appropriate operations supervisor will determine what action is required to improve the pilot's G-tolerance. The SQ/CC will determine if refresher training is required IAW AFI 11-404.

**Attachment 6 (Added-AETC)****T-38 STALL/SINK TRAINING MISSION**

**A6.1. (Added-AETC) Objectives.** The IP must exhibit a thorough knowledge of the following:

A6.1.1. **(Added-AETC)** Situations that could deteriorate into a stall or excessive sink rate condition, approach-to-stall recognition, and/or stall recovery procedures.

A6.1.2. **(Added-AETC)** Aft stick stall characteristics.

A6.1.3. **(Added-AETC)** Conditions encountered through improper stall recovery procedures.

A6.1.4. **(Added-AETC)** Appropriate cues to use in preventing stall and sink rate situations and appropriate actions for recovery.

A6.1.5. **(Added-AETC)** Instructional techniques for conducting stall and sink rate orientation training (stall pilot only).

**A6.2. (Added-AETC) Ground Training.** The squadron stall IP will:

A6.2.1. **(Added-AETC)** Discuss factors affecting stall and high sink rate recognition.

A6.2.2. **(Added-AETC)** Discuss the relationship between lift, drag, and thrust required and why stall recovery procedures are the best chance for survival.

A6.2.3. **(Added-AETC)** Brief the maneuvers to be accomplished in detail, purpose of each maneuver, and sequence in which each maneuver will be performed. The profile requires approximately 1,600 pounds of fuel.

**A6.3. (Added-AETC) Flying Training.** The demonstration will be flown in the following sequence:

**A6.3.1. (Added-AETC) Aft Stick Stall Demonstration (Stall Pilot Demonstration):**

A6.3.1.1. **(Added-AETC)** This maneuver demonstrates the full buffet range as the aircraft transitions from no buffet to the fully developed stall. It also demonstrates that power alone will not reliably recover the aircraft and confirms the importance of relaxing back stick pressure to recover.

A6.3.1.2. **(Added-AETC)** Enter the maneuver with gear down, and full or 60 percent flaps. Observe the buffet progression that follows. Initially, the buffet will be a high-frequency, low-intensity vibration (angle of attack [AOA] below .6). The maximum performance (recovery) buffet will be a high frequency with moderate intensity (AOA .65 to .75). The definite increase in buffet intensity will be a low-frequency, high-intensity "thumping" in the cockpit (AOA .8). A very high sink rate, heavy buffet, and high AOA (above 1.0) indicate an actual stalled condition.

A6.3.1.3. **(Added-AETC)** Observe the wing rock tendencies, sink rate, airspeed, vertical velocity indicator (VVI), and slab position. Next, select full afterburner without releasing back stick pressure and note the increase in buffet and the illusion of recovery. If the bank angle exceeds 90 degrees or stabilizes over 60 degrees, discontinue the

demonstration and recover the aircraft. Following the demonstration, recover the aircraft by relaxing back stick pressure and allowing airspeed to increase.

**A6.3.2. (Added-AETC) Approach-to-Stall Recovery Practice (IP Flies).** The purpose is to practice and review standard stall recovery procedures. Enter the maneuver with gear, full flaps, and normal final turn airspeed. Note the distinctive transition to the definite increase in buffet intensity, controlled use of rudder during recovery, and optimum buffet and AOA for recovery.

**A6.3.3. (Added-AETC) Stall and Sink Rate Recovery Demonstration.** The stall IP will normally use the demonstrations in paragraph A6.3.4 (Added) through paragraph A6.3.9 (Added) to simulate patterns resulting in rapidly stalled conditions. He or she will perform reaction recoveries involving aggressive aft stick application with delayed power response to MAX. This recovery will be performed 400 to 500 feet above the simulated ground altitude to simulate recognition of ground rush. Because recognition of excessive sink rate usually occurs at an AGL altitude of approximately 10 percent of VVI, 400 to 500 feet would approximate the amount of altitude available during a descent with a 4,000 to 5,000 feet per minute VVI. Following each demonstration, the stall pilot will repeat the setup and allow the IP to apply appropriate recovery procedures at the simulated ground rush altitude. Compare and validate the effectiveness of recovery techniques and the improved controllability, reduced altitude loss, and time taken to full recovery.

**A6.3.4. (Added-AETC) Inadvertent No-Flap.** This maneuver demonstrates the hazards of improper configuration. The stall pilot will enter the maneuver with gear, zero-percent flaps, and normal final turn airspeed. Set normal final turn picture and apply normal back stick pressure to turn. At the early onset of buffet, relax back stick pressure and allow an increase in airspeed and sink rate. At the simulated ground rush altitude, perform the reaction recovery. Observe the rapid onset of sink rate and unpredictability of control response. Repeat the entry scenario. When reaching the simulated ground rush altitude, transfer aircraft control to the IP and direct him or her to perform the recovery simulated ground rush altitude. Compare and validate the effectiveness of the recovery procedures.

**A6.3.5. (Added-AETC) Diving Final Turn.** This maneuver demonstrates the hazards of an overly aggressive pattern resulting from poor wind analysis, poor flight discipline, or both. The stall pilot will enter the maneuver with gear, 60 percent flaps, and normal final turn speed. Set final turn with more than 45 degrees of bank and establish an intentional high sink rate. Continue until the simulated ground rush altitude and then perform the reaction recovery. Observe the rapid onset of sink rate and the aggravated unpredictability of control response caused by the additional wing chamber generated by the flaps. Repeat the entry scenario and have the IP perform the recovery when the stall pilot initiates a reaction recovery at the simulated ground rush altitude. Compare and validate the effectiveness of the recovery procedures.

**A6.3.6. (Added-AETC) Slow at the Perch.** This maneuver demonstrates the hazards of poor airspeed control before the perch. The stall pilot will enter the maneuver with gear, full flaps, and final approach airspeed. Begin a normal final turn with slow airspeed and correct by only releasing back stick pressure to maintain on speed AOA. Allow the sink to continue until the simulated ground rush altitude and perform the reaction recovery. Observe the rapid onset of sink rate and very aggravated control response resulting immediately in wing rock

and stall condition. Repeat the entry scenario and have the IP perform the recovery when the stall pilot initiates a reaction recovery at the simulated ground rush altitude. Compare and validate the effectiveness of the recovery procedures.

**A6.3.7. (Added-AETC) Approach and Landing Stall Scenario.** During the following demonstrations, the stall pilot will simulate the hazards of reactionary responses involving abrupt control inputs low to the ground and the effects of instructor complacency. This recovery will be performed at a prebriefed altitude simulating the ground. Following each demonstration, the stall pilot will repeat the setup and allow the IP the opportunity to intervene on his or her own to prevent a high sink rate from developing. Focus training on timely instructor intervention.

**A6.3.8. (Added-AETC) Duck Under.** This maneuver demonstrates the hazards of sink rates from duck under glidepath corrections in visual or instrument approaches. The stall pilot will enter the maneuver with gear, full flaps, final approach speed, and normal glidepath (VVI). While flying an instrument glidepath, simulate a correction to a contact glidepath for a shorter touchdown point. At about 200 feet above the simulated ground rush altitude, lower the nose slightly and decrease power to maintain final approach speed. At about 100 feet above the simulated ground altitude, recognize the error and attempt to flare or go around, using the reaction recovery. A late decision to correct will result in simulated ground impact at a high sink rate or an improper attempt to hold the aircraft off the runway. Simulating a late transition past the visual descent point on a nonprecision approach would be an alternative demonstration. Repeat the entry scenario and allow the instructor to intervene to prevent a sink rate from developing. Focus training on timely instructor intervention.

**A6.3.9. (Added-AETC) High Flare.** This maneuver demonstrates the hazards of flaring high during the landing phase when ground effect would mask the classic buffet feel. The stall pilot will enter the maneuver with gear, 60 percent flaps, approximately 200 knots indicated airspeed (KIAS), and approximately 90 percent revolutions per minute (rpm) and will establish a 20-degree wings-level, nose-high pitch attitude. As airspeed decreases through 140 KIAS, lower the nose to achieve an approximate landing attitude. Simulate a late decision to go around, using the reaction recovery that will result in ground impact or an improper attempt to hold the aircraft off the runway. Repeat the entry scenario and allow the instructor to intervene to prevent a sink rate from developing. Focus training on timely instructor intervention and the lack of noticeable buffet or a definite increase in buffet intensity presence.

**Attachment 7 (Added-AETC)**

**T-38 SAMPLE LETTER OF XS**

**A7.1. (Added-AETC) Letter of Xs.** See Table A6.1 (Added) for a T-38 sample letter of Xs. Include qualification items appropriate for the squadron mission.

**Table A7.1. (Added) T-38 Sample Letter of Xs (Squadron Aircrew Qualifications).**

Name and Grade	MR	BMC	Stall Pilot	ACM IP	Experienced	FCF Pilot	FCF IP	Flight Examiner	Formation Pilot	Formation IP	Night Training	Initials

Approved on            (date)

(signature)

John T. Stewart, Lt Col, USAF  
Commander