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Flying Operations

F-16--AIRCREW TRAINING

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This publication implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*. This publication establishes effective and safe operations of the F-16. This publication is applicable to the entire DAF, including all uniformed members of the Regular Air Force (RegAF), United States Space Force, Air Force Reserve and Air National Guard, except where noted otherwise, all DAF civilian employees, and those with a contractual obligation to abide by the terms of DAF issuances. This publication does not apply to the United States Space Force. This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by 10 U.S.C., Section 8013, *Secretary of the Air Force*, 10 U.S.C., Section 9013, *Unannotated Title 10. Armed Forces*, and AFI 36-2406, *Officer and Enlisted Eval Systems*; EOs 9397 and 13478 (SSN). The applicable System of Record Notices (SORNs) F036 AF PC A, *Effectiveness/Performance Reporting Records* and F011 *AF XO Aviation Resource Management System (ARMS)* are available at: **http://dpclo.defense.gov/Privacy/SORNs.aspx**. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Air Combat Command (ACC) Directorate of Operations (ACCA3) will coordinate all changes to the basic volume with all major command (MAJCOM)/A3s. This publication may be supplemented at any level, but route all direct supplements to Air Force Flight Standards Agency (AFFSA) and ACC Flight Operations and

Training Branch (ACC/A3TO) for coordination prior to certification and approval. Field units below MAJCOM/direct reporting unit (DRU)/field operating agency (FOA) level forward copies of their supplements of this publication to their parent MAJCOM/ DRU/FOA OPR for post-publication review. Copies of MAJCOM/DRU/FOA- level supplements, after approval and publishing, will be made available on the e-Publishing website at **https://www.e-publishing.af.mil**. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See Department of the Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor's commander for non-tiered compliance items. Additional waiver authority to this publication is described in **paragraph 1.2**. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

Changed all references of Inexp/Exp to Wingman/WG and Flight Lead/FL throughout the publication, clarified flight lead criteria in **paragraph 1.6.1**, changed local IQT waiver months in paragraphs **4.3.4.1.4** and **4.3.4.1.5** from 12 months to 18 months, added a new profile to Night Sortie Recurrency in **paragraph 4.3.4.4**, changed **Table 4.1** to allow sims to update night sortie currency and combined A/G & A/A LOWAT, **Table 4.1, Note 14**, changed to allow either a A/A or A/G profile, added two new SEPT items in **paragraph 4.4.5.3.1.3**, removed suggested hours for FLUG in **paragraph 6.2.1**., IPUG in **paragraph 6.3.1**., FCF in **paragraph 6.7.1**, and added Fighter Integration and Wingman definitions to **Attachment 1, Terms**, and deleted Red Air numbers from the Demanding Mission (**paragraph A2.1.20**) definition in **Attachment 2**.

Chapter 1

GENERAL GUIDANCE

1.1. Roles and Responsibilities. This manual establishes the minimum Air Force standards for training, qualifying, and certifying personnel performing aircrew duties in the F-16. **Note:** For the purposes of this instruction, certification denotes a commander's action, whereas qualification denotes a formal evaluation. Reference AFIMAN 11-202 Volume 2, *Aircrew Standardization and Evaluation Program*, for an explanation of qualifications versus certifications. ACC/A3 is designated the responsible agency for this volume in accordance with (IAW) AFPD 11-2.

1.1.1. ACC/A3 will:

1.1.1.1. Chair annual Combat Air Forces Realistic Training Review Board to review ground and flying training requirements/programs. Focused at the group commander and MAJCOM/A3T (or equivalent) level, Realistic Training Review Board participation includes active and reserve component units/organizations. MAJCOM/A3s with major weapons systems for which ACC is lead command will be invited to send representatives and/or inputs.

1.1.1.2. Process all publication change requests.

1.1.1.3. Coordinate, publish and distribute the *Ready Aircrew Program (RAP) Tasking Memorandum (RTM)*, which describes annual training requirements for designated combat-coded units.

1.1.2. MAJCOM/A3s may elect to develop their own training requirements to fulfill designed operational capability (DOC) statement missions and documentation of aircrew certification via supplement or in their own MAJCOM RTM.

1.1.3. DRUs will:

1.1.3.1. Provide standard instructional texts to support operational weapons and tactics training. **(T-2)** Forward electronic copies to appropriate MAJCOM/A3 and Numbered Air Force/A3.

1.1.3.2. Review, update, and distribute changes to instructional texts.

1.1.3.3. Review subordinate unit training programs.

1.1.4. Wings/groups will:

1.1.4.1. Develop/approve/implement programs to ensure training objectives are met and assist subordinate units in management of training programs.

1.1.4.2. Attach Aircrew Position Indicator (API)-5/6/8 pilots to a flying squadron and designate the continuation training status for each, except when otherwise mandated. All API 5/6/8 Air Reserve Component (ARC) pilots will have continuation training status designated.

1.1.4.3. Review manning programs and position designations annually.

1.1.4.4. Review unit training programs and syllabi, annually. Forward unit supplements to this publication to MAJCOM/A3T (or equivalent), for coordination prior to certification

and approval (ANG to National Guard Bureau (NGB) NGB Combat Air Forces Division (NGB/A2/3/6/10O); AFR to AFR Command Combat Division (AFRC/A3D).

1.1.5. Squadrons/units will:

1.1.5.1. Combat-coded units will publish a letter of pilot qualifications/certifications monthly (example: Letter of X's). The letter provides a list of pilots that have special capabilities or qualifications for that month. The letter also provides utilization of basic mission capable (BMC) pilots (annotate missions/events that maintain qualification/certification).

1.1.5.2. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned/attached pilots.

1.1.5.3. Monitor assigned/attached pilot currencies and requirements.

1.1.5.4. Review training and evaluation records of newly assigned pilots and those completing formal training to determine the training required for them to achieve the appropriate qualification, certifications, and training status. After review and evaluation, archive the previous flying assignment training folder.

1.1.5.5. Develop unit training programs using RTM guidance and this volume. Consider attrition and collateral sorties (including associated training requirements) when developing unit training and flying hour programs.

1.1.5.6. Review qualifications and training requirements of non-pilots (flight surgeon, ground liaison officer, etc.) and determine appropriate flight restrictions.

1.1.5.7. Ensure pilots only participate in missions, events, and tasks for which they are being trained or trained, current, and prepared for that purpose.

1.1.5.8. Submit training reports as outlined in MAJCOM RTM guidance. See **paragraph 1.8.5**.

1.1.6. Individual pilots will:

1.1.6.1. Monitor currencies and requirements established by this instruction.

1.1.6.2. Only participate in ground and flying activities for which they are being trained or trained, current, and prepared for that purpose.

1.2. Waivers. Forward waiver requests through appropriate channels to the applicable MAJCOM/A3 or equivalent, or Commander Air Force Forces (COMAFFOR) for those aircrew and assets under the COMAFFOR's oversight, for approval. The COMAFFOR, MAJCOM/A3 (or equivalent) will notify ACC/A3 of waivers within 72 hours of issuance. Wing commanders will notify the publication OPR within 72 hours of waiver approval **(T-2)** IAW DAFMAN 90-161, a copy of the approved waiver must follow within 30 days of issuance **(T-2)** An email to the waived publication OPR that includes a completed DAF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*, or equivalent will suffice. Non-tiered directive statements default to T-3. Waiver authority for supplemental guidance will be as specified in the supplement and approved through higher level coordination authority.

1.3. Training Programs, Concepts, and Guidelines.

1.3.1. Units will design training programs to achieve the highest degree of mission readiness consistent with flight safety and resource availability. **(T-2)** Training programs are designed to progress pilots from Initial Qualification Training (IQT) (Basic (B)-Course or Transition/Requalification Training (TX)), then to Mission Qualification Training (MQT), Continuation Training (CT), and specialized training as required. The guidelines in this instruction should be balanced with operational procedures and combatant commander priorities.

1.3.2. ACC Training Support Squadron (ACC/TRSS) will assist operations group (OG)/CCs in development of training programs when/where tasked by the ACC/A3. Other MAJCOMs may submit requests for training program support to the ACC/A3. If validated, these requests will be prioritized and tasked to ACC/TRSS. **Note:** Test-coded units may develop syllabi to upgrade operational test pilots in support of specific test plans. These syllabi will be approved by the test group commander. **(T-2)**

1.4. Mission Recording.

1.4.1. Squadron commanders (SQ/CCs) will determine a program for supervisory review of mission recording(s). **(T-2)**

1.4.2. Pilots will record from takeoff to landing to the maximum extent possible in order to enhance training value. **(T-3)**

1.5. In-flight Supervision. Unless specifically directed, the SQ/CC determines the level of supervision necessary to accomplish the required training (unaccomplished tasks, new tasks, corrections to previous discrepancies, etc.).

1.5.1. **Flight Lead (FL)** . Instructor Pilots (IP) and FL-certified SQ supervisors may allow any pilot to lead portions of a mission if appropriately briefed. In any case, the IP or FL-certified SQ supervisor retains responsibility for the flight.

1.5.2. **Tactical Lead** . FLs may pass the tactical lead to their wingman for specific tasks. As the tactical lead, the wingman may make tactical decisions for the flight, but the FL retains overall authority and responsibility for the flight.

1.6. Flight Lead Criteria. A FL consistently demonstrates the skills (airmanship, situational awareness, and tactical leadership) required to effectively employ fighter aircraft in combat. SQ/CCs in units with a suppression of enemy air defenses (SEAD) designed operational capability statement (DOCS) should consider individual SEAD FL experience before designating pilots as SEAD FL. Designation as a FL requires SQ/CC certification and one of the following: **(T-3)**

1.6.1. Formal Training Unit (FTU) B-Course Graduate and all of the following:

1.6.1.1. 4-Ship flight lead up-grade (FLUG) completion.

1.6.1.2. FLUG entry: 250 F-16 flying sorties. **(T-3)**

1.6.2. FTU TX-Course Graduate (including the senior officer course) and one of the following:

1.6.2.1. Previous F-16 Pilot

1.6.2.1.1. If previously a FL, no additional criteria

1.6.2.1.2. If not previously a FL, follow B-Course criteria

1.6.2.2. Different fighter mission design series (MDS) background (F-35/F-15E/A-10, etc.)

1.6.2.2.1. Previously fighter FL requires both of the following:

1.6.2.2.1.1. 4-Ship FLUG completion

1.6.2.2.1.2. FLUG entry: 50 F-16 flying sorties. **(T-3)**

1.6.2.2.2. Previously fighter Wingman (WG) requires both of the following:

1.6.2.2.2.1. 4-Ship FLUG completion

1.6.2.2.2.2. FLUG entry: 100 F-16 flying sorties. **(T-3)**

1.7. RAP Policy and Management.

1.7.1. RAP defines the minimum training required to maintain the assigned training status.

1.7.2. The RAP training cycle is 12 months, aligned with the fiscal year and executed as outlined in the RTM (**Exception:** The Air Education and Training Command (AETC) training cycle is 12 months, determined by the MAJCOM). RAP training is designed to focus on skills needed to accomplish DOC-tasked missions following completion of IQT and MQT.

1.7.3. All combat coded unit regular Air Force API-1 positions, flying SQ/CC and Operations Officer (DO) positions are designated combat mission ready (CMR). OG/fighter group (FG)/CCs may designate other API-6 positions not assigned to the flying squadron as CMR. **Exception**: If a unit is over-manned, the SQ/CC will train the unit manning document API-1 pilot(s) to CMR and designate the overage pilot(s) no lower than BMC. **(T-2)** In this case, priority should be given to WG pilots. **Exception:** In the ANG/AFR at the OG/FG/CC discretion, any pilot may be designated CMR/BMC.

1.7.4. Active duty API-6 positions above squadron level are normally designated BMC. These BMC pilots are typically assigned to pilot positions whose primary job lies within wing supervision or a staff function that directly supports the flying operation.

1.7.5. All test/training/aggressor-coded unit regular Air Force pilot positions are designated Mission Ready (MR) (and fly at a BMC rate as a minimum).

1.7.6. An effective RAP training sortie requires accomplishing a complete primary, secondary, or basic skills mission. Effective sorties include a sufficient number of events applicable to that mission type, as determined by the SQ/CC. Pilots are not required to log effective RAP sorties when minimal training occurs. Only one RAP sortie may be logged per sortie (day or night) unless separated by air-to-air refueling (AAR) or hot pit refueling. **(T-2)**

1.7.6.1. Each mission on either side of the AAR/hot pit refueling must stand alone as an effective RAP training sortie. **(T-3)**

1.7.6.2. A maximum of three RAP training sorties will be logged per 24 hour period under these rules **(T-3)** (**Exception:** This limit does not apply to combat operations). Apply mission complexity guidance contained in AFMAN 11-2F-16 Volume 3, *F-16 Operations Procedures*. (e.g., prioritize flying upgrade missions and the most complex/demanding events to the first sortie).

1.7.7. Units converting from another MDS may fly pilots in CMR positions at the BMC rate if CMR sortie rates cannot be supported. (e.g., due to lack of trained maintenance personnel or available aircraft). In this case, CMR pilots maintain CMR status while flying the BMC rate. SQ/CCs will determine when pilots become non-combat mission ready (N-CMR) due to lack of resources or training, and ensure CMR designated pilots fly at the CMR sortie rate no later than one month prior to the scheduled operationally ready date. **(T-3)**

1.8. Training Records and Reports.

1.8.1. SQ/CC maintain pilot records for individual training and flight evaluations as applicable, IAW:

1.8.1.1. AFMAN 11-202V1.

1.8.1.2. AFMAN 11-202V2.

1.8.1.3. DAFMAN 11-401, *Aviation Management*.

1.8.2. SQ/CC track the following information for all pilots, as appropriate:

1.8.2.1. Ground training.

1.8.2.2. Requirements and accomplishment of individual mission types and events cumulatively for the training cycle.

1.8.2.3. One and three-month RAP lookback as outlined in the RTM.

1.8.2.4. Training requirements and accomplishment of individual currencies.

1.8.2.5. Weapons employment records in sufficient detail to document all employment attempts and hit percentages.

1.8.3. Units update aviation resource management system (ARMS) "No Date" with either the date of the last FTU or United States Air Force Weapons School (USAFWS)-equivalent training accomplished, or the unit mission certification date.

1.8.4. Units will maintain a training folder (electronic folder is acceptable) for each assigned and attached pilot. **(T-1)** Training folders include information on pilot qualifications/certifications and current assignment training documentation (upgrades, regression, waivers, special qualifications, etc.).

1.8.5. Periodic and End of Cycle (EOC) Training Reports (Operational Units and FTUs).

1.8.5.1. **Operational Unit Reporting** . Operational squadrons (including those deployed) will submit periodic and EOC RAP training reports as outlined in the RTM. **(T-2)** Squadrons may submit an out of cycle report at any time if higher headquarters assistance is required to prepare for DOC or deployment tasking. Reference current RTM for detailed instructions and report templates.

1.8.5.2. **FTU Reporting** . FTUs will report on their own training health as directed by their parent MAJCOM. **(T-2)**

1.9. Pilot Utilization Policy.

1.9.1. In general, WG API-1s should receive sortie allocation priority over FLs. Priorities for sortie allocation are as follows:

1.9.1.1. **Combat-coded Units** . CMR API-1, MQT API-1, CMR API-6, MQT API-6, BMC (API-All), API-5 pilot-physicians.

1.9.1.2. **Training-coded Units** . Formal syllabus training, MQT, instructor CT, authorized staff personnel not performing instructor or flight examiner duties (to include API-5 pilot-physicians not on instructor orders).

1.9.1.3. **Test and Aggressor-coded Units** . Requirements directed by MAJCOM, training required to prepare for assigned projects/tasking, BMC training requirements that cannot be accomplished on primary missions, API-5 pilot-physicians.

1.9.2. While API-1 pilots may perform additional duties outside of their flying squadron on a temporary basis, their primary responsibility is with the squadron to fill unit-assigned missions. Commanders will not prioritize workload outside of the squadron over squadron mission requirements for the employment of squadron API-1 pilots. **(T-3)**

1.9.3. Commanders will ensure WGs in the first year of their initial operational assignment are given scheduling priority and only perform non-flying duties related to operational/combat activities. **(T-3)**

1.9.4. Units should provide assigned/attached API-6/-8 pilots adequate resources to maintain minimum training requirements; however, support for API-6/-8 pilots should not come at the expense of the flying squadron’s primary mission.

1.10. Unit Manpower.

1.10.1. Commanders will ensure that pilots only fill authorized API-1/-5/-6 positions IAW Unit Manning Document. **(T-2)**

1.10.2. Wings with a formal training mission should strive to maximize instructor qualification (T-prefix) for API-6 pilots. At least one of the following pilots will maintain formal IP status: wing commander (WG/CC), or vice, OG/CC or deputy. **(T-3)**

1.10.3. API-8 pilot authorizations and test/aggressor-coded authorizations are IAW AFI 11-401 and MAJCOM guidance. If units cannot meet attached flyer requirements, they must request relief IAW DAFMAN 11-401, as supplemented. Units requiring flight hour adjustments for attached API-8 and applicable API-6 pilots must request program changes IAW MAJCOM directives.

Chapter 2

INITIAL QUALIFICATION TRAINING (IQT)

2.1. General. This chapter outlines IQT requirements for all pilots. IQT provides the training necessary to qualify pilots in a basic position and flying duties without regard to a unit's mission. Upon completion of IQT, the pilots attain Basic Aircraft Qualification (BAQ) status. BAQ is a prerequisite for MQT. Except for general officers above wing level, BAQ is not a long-term qualification status. Waiver authority for pilots, other than general officers above the wing level, to remain BAQ is MAJCOM/A3 (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D).

2.1.1. **Formal Training** . IQT includes B-course, TX, and senior officer course training normally conducted during formal syllabus courses at FTU squadrons. Formal course graduates are proficient in mission tasks as indicated by the course training standards and required proficiency levels of the FTU syllabi.

2.1.2. **Local Training** . In exceptional circumstances when FTU training is not available within a reasonable time period, or unaccomplished tasks exist upon graduation from FTU, local training will be conducted in accordance with the provisions in this chapter. AETC or 19 AF will coordinate with gaining MAJCOM/A3T equivalents to ensure the resources required to perform unaccomplished FTU tasks (e.g., Rear Cockpit (RCP) IPs) are available, or to coordinate provision of those resources. When local training is approved, the gaining MAJCOM assumes responsibility of this training using the appropriate formal course syllabi. The burden of resources required for the training will be on the gaining MAJCOM with the exception of those requirements exclusive to the FTU (e.g., RCP IPs). Combat Air Forces (CAF) OGs may waive the D-model requirement for events.

2.2. Approval and Waiver for Local IQT.

2.2.1. Gaining MAJCOM/A3 (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D) is the approval authority to conduct local IQT and is the waiver authority to change the requirements of the formal course syllabus. Inform ACC Flight Operations Division (ACC/A3T) of approved waivers prior to commencing local IQT.

2.2.2. Gaining MAJCOM/CC (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D) is the approval authority for local IQT for colonel-selects and above to be conducted at the unit to which the officer is assigned. Inform ACC/A3T of approved waivers prior to commencing local IQT .

2.2.3. Wing requests to conduct local IQT includes the following:

2.2.3.1. Justification for the local training in lieu of FTU training. **(T-3)**

2.2.3.2. Summary of individual's flying experience to include last centrifuge date. **(T-3)**

2.2.3.3. Date training will begin and expected completion date. **(T-3)**

2.2.3.4. Requested exceptions to formal course syllabus, with rationale. **(T-3)**

2.3. Prerequisites. Course prerequisites will be IAW the appropriate formal course syllabus and USAF Education and Training Course Announcements.

2.4. Ground Training. OG/FG/CCs may tailor ground training to the individual's background and experience or peculiar local conditions.

2.5. Flying Training.

2.5.1. Training should be completed within the time specified by the syllabus or expected completion date for local IQT. Failure to complete within the specified time limit requires notification IAW syllabus or, in the case of local IQT, the gaining MAJCOM/A3 (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D) with pilot's name, rank, reason for delay, planned actions, and estimated completion date. **(T-2)**

2.5.2. Successful completion of IQT requires the upgrading pilot (UP) to complete at a minimum an aircraft Instrument (INSTM) Qualification (QUAL) evaluation IAW AFMAN 11- 202V2 and AFMAN 11-2F-16V2, *F-16-Aircrew Evaluation Criteria*.

2.5.3. UPs fly under IP supervision until completing the INSTM/QUAL evaluation.

2.5.4. Formal course syllabus mission objectives and tasks are minimum requirements. The SQ/CC may authorize additional training events based on UP proficiency and background. Additional training due to UP non-progression is incorporated within the constraints of the formal course syllabus.

2.6. Senior Officer Course.

2.6.1. All formal training courses for senior officers (colonel-selects and above) will be conducted at FTUs unless waived IAW **paragraph 2.2.2**.

2.6.2. Senior officers must meet course entry prerequisites outlined in the AETC F-16 FTU syllabus and complete all requirements unless waived IAW syllabus directives or **paragraph 2.2.1**.

2.6.3. If a senior officer must be trained at the base to which assigned, the officer will be in formal training status. **(T-2)** Unit duties will be turned over to appropriate deputies or vice commanders until training is completed. **(T-2)** Exceptions to this policy must be approved by the gaining MAJCOM/CC (ANG: Director of ANG Forces ACC (ACC/CG); AFR: Commander Air Force Reserve (AFRC/CC)) submitted through MAJCOM/A3.

Chapter 3

MISSION QUALIFICATION TRAINING (MQT)

3.1. General. MQT is an OG/CC approved unit-developed, training program that upgrades IQT- complete (BAQ) pilots to accomplish the unit specific missions. The SQ/CC will develop and maintain responsibility for the local MQT programs. **(T-3)** Guidance in this chapter, which represents the minimum, is provided to assist SQ/CCs in developing their MQT program. Units are expected to further tailor programs based on an individual's current qualifications, experience, currency, documented performance, and formal training. Gaining units will review graduate AETC Form 904, *Training Summary*; DAF Form 475, *Education/Training Report*; and other pertinent records prior to developing individual student Mission Qualification Training Syllabus. Applicable portions of MQT may be used to create a requalification program for pilots who have regressed from BMC/CMR to specifically address the deficiencies which caused the regression. For test/training/aggressor-coded units, see **paragraph 3.3**.

3.2. Combat-coded Unit MQT. The SQ/CC will ensure a pilot completes MQT within 90 calendar days (ARC): 120 calendar days). **(T-3)** Timing starts at the pilot's first duty day at the gaining operational unit. If a pilot elects to take leave prior to entering MQT, the timing begins after the termination of the pilot's leave. MQT is considered complete with the SQ/CC certifying the pilot as CMR/BMC. Notify MAJCOM/A3T (or equivalent) (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D) if there is a delay beginning MQT that exceeds 30 days or training exceeds the 90-day time period (ARC: 120 calendar days).

3.2.1. MQT Syllabus Minimum Requirements. At a minimum, SQ/CCs will include the following events within the individualized MQT program:

3.2.1.1. Ground Training (see **paragraph 3.2.3**). **(T-2)**

3.2.1.2. Local area orientation (LAO) simulator (SIM) (if not previously accomplished within 24 months). **(T-3)**

3.2.1.3. LAO Sortie (if not previously accomplished within 24 months). **(T-2)**

3.2.1.4. Tactical sortie (may be combined with LAO sortie). **(T-2)**

3.2.1.5. Air Combat Training (ACBT) (see **paragraph 3.2.6**). **(T-2)**

3.2.1.6. Initial weapons employment certification IAW **Chapter 5** and the RTM. **(T-2)**

3.2.1.7. Current INSTM/QUAL and mission (MSN) evaluations IAW AFMAN11-202V2 and AFMAN11-2F-16 Volume 2, *F-16—Aircrew Evaluation Criteria*. **(T-2)**

3.2.2. Restrictions.

3.2.2.1. SQ/CCs will not fly MQT pilots in Flag-level exercises or weapons system evaluation programs. **(T-3)**

3.2.2.2. There is a 90 day grace period (ARC: 180 days) granted for completion of the following training items after the SQ/CC certification to CMR/BMC: AAR, night training, aircrew chemical, biological, radiological, nuclear (ACBRN) flight (see **paragraph 3.2.7**), and initial/mission verifications and/or initial nuclear certification (not required for BMC).

SQ/CCs will regress pilots who fail to accomplish these tasks within the grace period to N-CMR/ non-BMC (N-BMC). **(T-3)**

3.2.2.3. Proficiency and currency in day events will be demonstrated prior to training in similar events at night (unless accomplished dual with an IP within a multi-seat fighter). **(T-1)**

3.2.3. **Ground Training.** Units develop blocks of instruction covering areas pertinent to the unit's mission as determined by the SQ/CC. Training accomplished during IQT may be credited towards this requirement.

3.2.3.1. Newly assigned pilots require theater indoctrination academics IAW AFMAN 11-202V1 prior to the first flight. Theater indoctrination academics may be accomplished during MQT academics or as part of the MQT LAO briefing.

3.2.3.2. **Initial Verification.** Initial verification is a formal process where pilots demonstrate to a formal board satisfactory knowledge of the member's airmanship, basic position and flying duties without regard to a unit's mission. The SQ/CC determines the board's composition. Initial verification shall be completed within 60 days of beginning MQT. **(T-3)** As part of the verification process, a simulator mission may be included at the SQ/CC discretion.

3.2.3.3. **Mission Verification.** Mission Verification is a formal process where pilots demonstrate to a formal board satisfactory knowledge of the squadron's assigned mission(s). The SQ/CC establishes the board composition. Desired composition is SQ/CC or SQ/DO, weapons, electronic combat, intelligence, and plans representatives. Mission verification will be completed within 90 days (ARC: 180 days) after completing MQT. **(T-3)** As part of the verification process, a simulator mission may be included at the SQ/CC discretion. FLs who accomplished initial verification or nuclear certification in a previous assignment may, at SQ/CC discretion, complete either an initial or a continuation mission verification to meet the requirements of this section.

3.2.3.4. **Initial Nuclear Certification.** SQ/CCs will ensure pilots assigned to nuclear-tasked squadrons complete certification in accordance with AFI 13-520, *Nuclear, Space, Missile, Command and Control* and MAJCOM/theater directed nuclear certification program. **(T-2)** If conflicting guidance exists, apply the most restrictive guidelines. Pilots who certify are not required to complete verification.

3.2.4. **SIM Training.** In addition to the LAO SIM (IAW **paragraph 3.2.1**.), MQT may include: day/night tactical SIMs. SQ/CCs will include the following events in simulator training:

3.2.4.1. Selected emergency procedures (EPs). **(T-2)**

3.2.4.2. Unusual attitude recovery (UAR). **(T-2)**

3.2.4.3. Inadvertent weather entry procedures. **(T-2)**

3.2.4.4. Lost wingman. **(T-2)**

3.2.4.5. Emergency divert. **(T-2)**

3.2.4.6. Local procedures and approaches. **(T-2)**

3.2.5. **Flying Training** . MQT progression and performance are documented within unit developed gradebooks. The MQT program culminates with an AF Form 8, *Certificate of Aircrew Qualification,* checkride if required. MQT programs designed to regain CMR/BMC status do not require an AF Form 8 unless dictated by other regulations or SQ/CC. Maximum use of mission recording and captive missiles is encouraged on all MQT missions.

3.2.5.1. **Supervision** . FTU graduates in MQT require an IP. All other MQT pilots require an IP or FL-certified SQ supervisor.

3.2.5.2. **Breaks-in-training** . If more than 14 calendar days elapse between sorties, the UP requires an additional review sortie before continuing in the program. The SQ/CC may substitute a Mission Training Center (MTC) mission (with an IP) for a required review sortie.

3.2.6. **ACBT Program** . The following sorties (in sequence) are used for initial ACBT certification or to regain ACBT certification. Units may expand this program to achieve desired proficiency or capability.

3.2.6.1. **Aircraft Handling Characteristics (AHC)** . Demonstrate proficiency with aircraft maneuvering capabilities and limitations, by practicing advanced handling maneuvers (IAW Air Force Tactics, Techniques and Procedures (AFTTP) 3-3.F-16), *Combat Aircraft Fundamentals—F-16*).

3.2.6.2. **Basic Fighter Maneuvers (BFM) (1v1)** . Demonstrate proficiency in defensive, offensive or high aspect BFM skills.

3.2.6.3. **Air Combat Maneuvering (ACM)** . Demonstrate proficiency in element air-to-air (A/A) maneuvering and employment.

3.2.6.4. **Air Combat Tactics (ACT)** . Demonstrate proficiency in element A/A employment primarily in the beyond visual range arena.

3.2.7. **Initial Aircrew Chemical, Biological, Radiological, Nuclear (ACBRN) Training** . ACBRN training integrates pilot training with other functional areas (maintenance, intelligence, security, etc.) required to conduct combat operations in a chemical environment and applies to all CMR/BMC pilots. Pilot demonstrates a basic proficiency of flight and mission tasks while wearing the ACBRN equipment. Accomplish ACBRN training IAW AFMAN 11-301 Volume 1, *Aircrew Flight Equipment (AFE) Program*, AFI 16-1301, *Survival, Evasion, Resistance, and Escape (SERE) Program*, and the RTM. Pilots who accomplished initial ACBRN training in previous fighter MDS are not required to reaccomplish the ACBRN flight.

3.2.7.1. **ACBRN Ground Training** . Ground training will be accomplished IAW AFMAN 11-301V1 and AFI 16-1301.

3.2.7.2. **ACBRN MTC** . Introduce operations in full ACBRN gear (anti-exposure suit not required), harness, and gravitational load factor (G)-suit. An ACBRN MTC may use existing mission profiles and count toward MTC training cycle requirements. Units use MTC (primary) or actual aircraft cockpit (secondary) for ACBRN MTC training. The ACBRN MTC is accomplished once in a career (per MDS) and should be conducted as close as possible (but not more than 30 days prior) to the ACBRN flight.

3.2.7.3. **ACBRN Flight Training** . Flight training highlights the limitations of operating while wearing ACBRN equipment. Practice full ACBRN equipment donning and doffing procedures/sequence in conjunction with the ACBRN flight. Adhere to the following ACBRN flight restrictions:

3.2.7.3.1. Wear only Aircrew Eye and Respiratory Protection (AERP) System (or mask with filter pack) and gloves. **(T-2)**

3.2.7.3.2. Only one pilot in the element wears ACBRN equipment, supervised by a FL. **(T-3)**

3.2.7.3.3. Accomplish events in which the pilot is current and certified. **(T-2)**

3.2.7.3.4. Only conduct preflight operations in Fighter Index of Thermal Stress "Normal" (refer to DAFI 48-151, *Thermal Stress Program*) conditions, as adjusted for the partial ACBRN gear. **(T-3)** Include full walk around, AERP ingress, cockpit interior check and AERP egress. If other than condition "Normal", another qualified pilot may conduct the walk around.

3.2.7.3.5. Minimum planned formation spacing is "Route." "Close" formation is allowed only if required for safe mission accomplishment. Refer to AFTTP 3-3.F-16 for descriptions of formation spacing.

3.2.7.3.6. Minimum altitude is 500 feet above ground level (AGL) except takeoffs, approaches, and landings. **(T-2)**

3.2.7.3.7. Minimum weather is 1,500 feet ceiling and 3 miles visibility. **(T-2)**

3.2.7.3.8. No night sorties. **(T-2)**

3.2.7.3.9. AAR requires an IP. **(T-2)**

3.3. Test/Training/Aggressor-coded Unit MQT.

3.3.1. MQT is a unit-developed training program that upgrades pilots to MR status in order to accomplish the unit's specific missions. The FTU instructor course is equivalent to a unit MQT program. If applicable, training accomplished during IQT may be credited towards this requirement. MQT is considered complete with the SQ/CC certifying the pilot as MR.

3.3.2. MQT Syllabus Minimum Requirements. At a minimum, SQ/CCs will include the following events within the individualized MQT program:

3.3.2.1. LAO Sortie (if not previously accomplished within 24 months). **(T-2)**

3.3.2.2. Unit mission sortie (may be combined with LAO sortie). **(T-2)**

3.4. Flight Surgeon and US Army Ground Liaison Officer Ground Training.

3.4.1. **Ground Training** . Units train/document assigned flight surgeon and ground liaison officers. The following events will be accomplished prior to the initial flight briefing: aircraft general review, hanging harness training (as applicable), egress training, protective equipment training, anti-G straining maneuver (AGSM) training, and an instrument/emergency procedures simulator (optional) with a CMR/BMC pilot. **(T-3)**

3.4.2. **Flight Training** . As applicable, the first flight in the unit-assigned aircraft will be with an IP and may be flown in conjunction with other training sorties. **(T-3)** The briefing and sortie

will emphasize stick/throttle interference avoidance, communications and equipment, tactical display interpretation, and the aircraft's performance envelope. **(T-3)**

Chapter 4

CONTINUATION TRAINING (CT)

4.1. General. This chapter and the current F-16 RTM outlines ground and flying training requirements for BAQ, BMC/CMR, and MR pilots in test/training/aggressor-coded units. Pilots must be qualified IAW DAFMAN 11-401, AFMAN 11-202V1, AFMAN 11-202V2, and AFMAN 11-2F-16V2. SQ/CCs will ensure assigned pilots complete an IQT to fly in a BAQ status and a MQT or FTU IP upgrade to fly in a BMC/CMR or MR status. **(T-2)** For test/training/aggressor-coded units, see **paragraph 4.5**.

4.2. Continuation Training (CT). CT consists of two aspects. The first involves training in the basic flight skills necessary to ensure the safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions.

4.3. Currencies, Recurrency and Recurrency/Requalification Programs.

4.3.1. **Currencies** . **Table 4.1**, as supplemented by the most current RTM, defines currency requirements for all pilots. If a pilot loses a particular currency, that sortie/event may not be performed except for the purpose of regaining currency as noted.

4.3.2. **Recurrency** . Pilots accomplish overdue training requirements as specified by the SQ/CC before they are considered recertified to perform the task. Pilots overdue on training annotated in **Table 4.1** as affecting CMR/BMC status requires regression to N-CMR/N-BMC. Unless otherwise specified, supervisory requirements pertaining to recurrency may be satisfied in the cockpit or flight position that offers the best control of the mission, as determined by the SQ/CC.

4.3.3. **Noncurrent Versus Unqualified** .

4.3.3.1. **Noncurrent** . A pilot becomes noncurrent in a particular currency if they exceed the specified timeframe listed in **Table 4.1** (e.g., a WG becomes noncurrent for landing after 30 days from last landing).

4.3.3.2. **Unqualified** . For criteria specified in **paragraph 4.3.4**, a pilot can become "unqualified" for landing and instructor currencies.

4.3.4. Currencies Requiring Recurrency/Requalification Program.

4.3.4.1. **Landing Recurrency/Requalification** . Pilots become unqualified after loss of landing currency plus 180 days (e.g., a WG who has not landed for 211 days). Loss of landing currency requires the following action (timing starts from date of last landing):

4.3.4.1.1. 31/46 (WG/FL) to 90 days (e.g., a WG who has not landed for 31 to 90 days). Regain landing currency IAW **Table 4.1**.

4.3.4.1.2. 91 to 135 days. Requirements in **paragraph 4.3.4.1.1**, plus IP-supervised EP SIM.

4.3.4.1.3. 136 to 210/225 days (WG/FL) (e.g., an a WG who has not landed for 136 to 210 days). Requirements in **paragraph 4.3.4.1.2**, plus open/closed book instrument examinations.

4.3.4.1.4. 211/226 days (WG/FL) to 18 months (e.g., a WG who has not landed for 211 to 547 days). Requalification program IAW AFMAN 11-202V1. OG/FG/CC is the approval authority to conduct this training locally.

4.3.4.1.5. Greater than 18 months. Accomplish applicable formal TX course. Reference **paragraph 2.2** for local IQT waivers.

4.3.4.2. **Instructor Recurrency/Requalification** . Pilots become unqualified after loss of instructor currency plus 180 days (e.g., an IP who has not instructed for 271 days).

4.3.4.2.1. Timing for loss of instructor currency starts from the last instructor event and requires the following action:

4.3.4.2.1.1. 91 to 180 days. Regain instructor currency with an IP.

4.3.4.2.1.2. 181 to 270 days. Regain IP currency IAW SQ/CC directed program that may result in a flight evaluation.

4.3.4.2.1.3. Greater than 270 days. Accomplish an AF Form 8 requalification checkride IAW AFMAN 11-202V2 and AFMAN 11-2F-16V2.

4.3.4.2.2. IPs instruct airborne events in which they are current and qualified. With SQ/CC approval, IPs who become N-CMR/N-BMC may still instruct in events for which they are current and qualified.

4.3.4.3. **ACBT Recurrency** . Loss of ACBT currency requires the following action (timing starts from date of last event):

4.3.4.3.1. 61/91 (WG/FL) to 180 days. Dedicated sortie(s) including AHC and BFM.

4.3.4.3.2. Greater than 180 days. SQ/CC tailored ACBT program IAW **Chapter 3** and documented in gradebook.

4.3.4.4. **Night Sortie Recurrency** . Pilots losing night sortie currency accomplish the following events (under night vision devices (NVDs)) prior to unrestricted night operations:

4.3.4.4.1. Pilots who have had more than 120/180 (WG/FL) days elapse since logging last night sortie require a NVD academic review prior to the recurrency sortie (see **paragraph 4.4.4.6**.).

4.3.4.4.2. 2-ship basic formation work / light drills and unit specific mission elements.

4.3.4.4.3. Tactical turns and maneuvers.

4.3.4.4.4. A dedicated non-demanding sortie using one of the following profiles:

4.3.4.4.4.1. Tactical intercepts profile not to exceed 2v2, above 5,000 feet AGL or minimum safe altitude (MSA) whichever is higher, or

4.3.4.4.4.2. 2-ship basic surface attack (OG/CC waiverable up to 4-ship) above 4,500 feet AGL or MSA whichever is higher, or

4.3.4.4.4.3. 2-ship unopposed surface attack tactics/suppression of enemy air defenses (SEAD) (OG/CC waiverable up to 4-ship) above 4,500 feet AGL or MSA whichever is higher, or

4.3.4.4.4.4. Close air support (CAS) above 4,500 feet AGL or MSA whichever is higher.

4.3.4.4.4.5. 2-ship Red Air sortie above 4,500 feet AGL or MSA, whichever is highest.

4.3.4.4.5. **{Non-combat coded units}** SQ/CC selected night profile/sortie from the unit's mission set.

4.3.5. ACC Air Operations Squadron Currency Requirements. Units will comply with AFI 11-207, *Fighter Aircraft Delivery*, for additional currencies required for the flight delivery of aircraft coordinated through the ACC Air Operations Squadron. **(T-2)**

Table 4.1. F-16 Currencies.

Event	To update accomplish in:	* WG	* FL	Affects CMR/BMC	To regain currency:	Notes
Demanding Mission	Any mission	21	30	No	Non-demanding day mission	1
Night Sortie	Any night sortie or Sim	120	180	No	Night sortie/profile	2, 3
Landing	Day or night landing	30	45	No	Day landing	2, 4
RCP Landing	RCP Landing	N/A	90	No	RCP Landing	2
Simulated Flame Out	Flight or SIM	60	90	No	Flight	2, 5
Precision Approach	Flight or SIM	30	45	No	Flight or SIM	6
Head-Up Display (HUD)-Out Approach	Flight or SIM	90	120	No	Flight or SIM	6
Form Approach	Flight	120	180	No	Flight	2, 7
Instructor	Flight or SIM	N/A	90	No	Flight or SIM	8
AAR	Flight	180	180	Yes	Flight	2
ACBT	Flight	60	90	Yes	Flight	2, 9, 10
ACT	Flight	60	90	No	Flight	2, 10, 11

Terminal Attack Control (TAC)	Flight or SIM	60	90	No	Flight	2
Functional Check Flight (FCF)	FCF sortie or SIM	N/A	180	No	FCF Sortie or SIM	12
Weapons Delivery	Event in Flight (actual or simulated)	60	90	Yes	Event in Flight(actual or simulated)	2
Low Altitude A/A or A/G	LOW A/A or A/G flight	60	90	No	LOW A/A or A/G flight	2, 10, 13
NVD Low Altitude Training (LOWAT)	Night flight	90	120	No	NVD LOWAT FAM	2, 14

Notes:

* Denotes number of days between events after which the pilot goes non-current.

1 – Recurrency for pilots is one of the dedicated non-demanding sorties as defined in **Attachment 2.** In addition, BAQ pilots will fly in a supervised status (FL-certified SQ supervisor or IP) any time a non-demanding mission is required.

2 – Recurrency supervision is an IP or FL-certified SQ supervisor, current in the event.

3 – Loss of currency restricts pilots to single ship instrument sorties (no NVDs) only until recurrency accomplished in accordance with **paragraph 4.3.4.4**. Each OG will decide if the sim is appropriate to update currency.

4 – Loss of landing currency and recurrency/requalification in accordance with **paragraph 4.3.4.1**.

5 – For units with an MTC this currency may be updated in the simulator.

6 – Pilots require currency in order to fly an approach through actual weather down to the pilot weather category minimums. **(T-3)**. Loss of currency results in regression to the next higher category. Recurrency supervision during day visual flight rules conditions may be any pilot current in the event in chase or from the wingman position, or SIM IP if accomplishing recurrency in the SIM. All other times regain currency in accordance with AFMAN 11-202V3, *Flight Operations*, as supplemented.

7 – FLs may update currency from either lead or wing position. Wingmen may only update currency from the wing position.

8 – Loss of Instructor currency and recurrency/requalification in accordance with **paragraph 4.3.4.2**. USAFWS upgrade missions count as instructor missions for currency. Updating or regaining currency in the SIM requires IPs to instruct while flying the SIM.

9 – Recurrency in accordance with **paragraph 4.3.4.3**.

10 – **Exception:** Currency for formal course IPs (weapons instructor course and FTU), participation in local CT and formal syllabus training missions is 180 days.

11 – Currency is updated by accomplishing an A/A event as an element. ACT currency is required for ACT engagements greater than 2v2. Opposed A/G missions that constitute ACT (2v2 min) update this currency.

12 – Supervision for flight or simulator will be a current FCF pilot.

13 – Currency is required to perform the event at or below 1,000 feet AGL in the pilot's low altitude training (LOWAT) category (Category I, II, III). See **Chapter 6** for low altitude step down training (LASDT) and LOWAT categories. Loss of currency requires regression to the next higher category event in which the pilot is current. Operations in a lower block category will update the higher block categories. Recurrency requires satisfactory performance in the following events: vertical awareness training, hard turns, tactical formation, and a low altitude tactical event. A low altitude tactical event can be any attack, tactical intercept, or threat reaction corresponding to the type of low currency (either air-to-air or air-to-ground).

14 – Currency is required in NVD LOWAT to fly in the night low altitude environment (In accordance with AFI 11-214, *Air Operations Rules and Procedures*). Loss of currency will require re-accomplishment of single ship low altitude familiarization (IP/Sq supervisor chased) in accordance with **paras 6.6.4.1** through **6.6.4.3** plus either **6.6.4.4** or **6.6.4.5**.

4.4. Combat-Coded Units.

4.4.1. **BAQ** . Pilots achieve BAQ status after successfully completing IQT and remain in BAQ status until the completion of MQT IAW **Chapter 3**. BAQ is not a permanent status except for general officers above the wing level (reference AFMAN 11-202V1 for restrictions), and any other pilots specifically authorized by MAJCOM/A3 (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D). SQ/CCs will ground pilots who are in BAQ status for more than six months unless the pilots are enrolled in a program to achieve CMR/BMC. **(T-2)** BAQ Requirements:

4.4.1.1. INSTM/QUAL evaluation IAW AFMAN 11-202V2 and AFMAN 11-2F-16V2.

4.4.1.2. Currencies (as applicable) IAW **paragraph 4.3**.

4.4.1.3. Fly a supervised sortie with an IP or FL-certified SQ supervisor at least once every 60 calendar days. If a BAQ pilot does not fly for 21 days (WG) or 30 days (FL), the next sortie must be flown with an IP or FL-certified SQ supervisor. **(T-3)**

4.4.2. **BMC** . BMC establishes the minimum training required for pilots to be familiar with all (and may be certified, current, and proficient in some) of the primary DOC statement mission requirements of their assigned or attached unit and weapon system. Designate and maintain BMC pilots IAW **paragraph 1.7.4**.

4.4.2.1. BMC pilots at a minimum maintain familiarization with all unit primary missions. BMC pilots accomplish all mission-related ground training designated by their attached SQ/CC and may deploy and participate in any mission as determined by the SQ/CC. Failure to complete required training IAW with this volume as outlined in and the RTM (both

flying and ground) results in regression to non-BMC (N-BMC) status. While N- BMC, the SQ/CC determines which missions the pilots may perform, and the supervision required.

4.4.2.2. **BMC Requirements** .

4.4.2.2.1. INSTM/QUAL and MSN evaluations IAW AFMAN 11-202V2 and AFMAN 11-2F-16V2.

4.4.2.2.2. RAP sorties, sortie rate (lookback), mission types, and events (including weapons certifications), and applicable mission/event ground training requirements IAW the procedures set forth in this volume and as outlined in the RTM. API-8 (e.g., Numbered Air Force/MAJCOM inspector general) pilots should fly the BMC mission rate; however, they are not required to complete BMC-specific missions/events or meet RTM lookback requirements. API-8 pilots (see **paragraph 4.6.2**) will strive to accomplish basic skills requirements with allotted BMC sorties.

4.4.2.2.3. Currencies (as applicable) IAW **Table 4.1**.

4.4.2.2.4. LOWAT Category I certification.

4.4.3. **CMR** . CMR establishes the minimum training required to remain proficient in all of the primary DOC statement missions tasked to their assigned or attached unit and weapon system. Designate and maintain CMR pilots IAW **paragraph 1.7.3**.

4.4.3.1. CMR pilots maintain proficiency in all primary missions of the flying unit to which they are assigned or attached. SQ/CCs will regress pilots who fail to complete required training to non-CMR (N-CMR) status. **(T-3)** While N-CMR, pilots may participate in missions, including exercises and contingency operations, in which they are proficient at the discretion of the SQ/CC.

4.4.3.2. **CMR Requirements** .

4.4.3.2.1. INSTM/QUAL and MSN Evaluations IAW AFMAN 11-202V2 and AFMAN 11-2F-16V2.

4.4.3.2.2. RAP sorties, sortie rate (lookback), mission types, and events (including weapons certifications), and ground training IAW the procedures set forth in this volume and as outlined in the RTM.

4.4.3.2.3. Currencies (as applicable) IAW **paragraph 4.3**.

4.4.3.2.4. LOWAT Category I certification.

4.4.3.2.5. Verification IAW **Chapter 3**.

4.4.3.2.6. Nuclear Surety Training (tasked units).

4.4.4. **Ground Training** . Accomplish ground training IAW the parent directives and as outlined in the RTM tables. Units may credit ground training accomplished during IQT/MQT toward CT requirements for the training cycle in which it was accomplished. Ensure ground training is tracked in ARMS to the maximum extent possible.

4.4.4.1. **Weapons and Tactics Academic Training** . Establish a weapons and tactics academic training program to satisfy MQT and CT requirements. FL upgrade (FLUG) and IP upgrade (IPUG) flows include weapons and tactics academic training commensurate

with the level of upgrade being accomplished. SQ/CCs will provide guidance to the unit weapons shops on an annual CT weapons and tactics academics program that ensures pilots are informed/reminded of new/current F-16 weapons, systems, and mission-specific tactics, techniques and procedures. **(T-3)** Academic instructors should be USAFWS graduates to the maximum extent practical.

4.4.4.2. **Intelligence Training** . SQ/CCs will develop the unit external intelligence training for pilots IAW AFI 14-1020, *Intelligence Mission Qualification and Readiness,* MAJCOM and local unit instructions. **(T-3)**

4.4.4.3. **Aircraft Servicing** . SQ/CCs will ensure pilots are trained and prepared to accomplish all aircraft servicing actions necessary to beddown/turn aircraft when off-station without maintenance support. **(T-3)**

4.4.4.4. **CT Verification** . CMR pilots participate in a verification as a briefer, board member, or seminar participant at the frequency referenced in the RTM. BMC pilots should participate in a verification to facilitate future upgrade to CMR status; at the discretion of the SQ/CC. Pilots who participate in a unit deployment to a tasked area of responsibility may receive credit for CT Verification.

4.4.4.5. **Cockpit/Crew Resource Management (CRM)** . Pilots participate in CT CRM training at the frequency referenced in the RTM (reference AFMAN 11-290, *Cockpit/Crew Resource Management and Threat & Error Management Program*). Briefs and debriefs include the core curriculum of CRM/TEM training IAW AFMAN 11-290 and the appropriate MAJCOM supplements. The instructor CRM/TEM course may be used to satisfy the periodic requirement.

4.4.4.6. **Night Vision Device Refresher Academics** . Conduct refresher training IAW AFMAN 11-202V1 and as outlined in the RTM.

4.4.5. **Simulator Training** . Conduct RTM SIM in the best available SIM. SQ/CCs determine the required supervision for CT MTC missions based on SIM capabilities and mission training objectives. Units develop scenarios that cover RAP-event MTC missions based on unit tasking and emergency procedure/general systems knowledge requirements. Emphasis should be placed on skill-set training not attainable during live fly and SQ/CCs will review scenarios each training cycle. **(T-3)** Pilots may receive credit for training accomplished in other SIMs (e.g., industry SIMs) if approved by the SQ/CC.

4.4.5.1. Tactical SIM RAP training should emphasize the following areas: DOC-relevant simulated combat employment; threat recognition; threat reactions and counter tactics; weapons malfunctions; contested, degraded, and operationally limited operations (CDO); battle damage and wounded bird procedures; controllability; and structural damage checklists.

4.4.5.2. EP SIM RAP training in the following areas will be accomplished at least once each training cycle: unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, controlled and uncontrolled ejection parameters, aircraft subsystem failure checklist procedures, relevant EPs, minimum fuel and emergency divert profiles, and precision instrument procedures. Incorporate environmental/mission/system scenarios to include NVD use that can lead to Type I spatial disorientation. Intent is to highlight the role that instrument crosscheck

discipline plays in prevention of unrecognized unusual attitudes and recognition/recovery from recognized unusual attitudes/spatial disorientation.

4.4.5.3. **Situational Emergency Procedure Trainer (SEPT)** . This training is not an evaluation, but a review of EPs and aircraft systems operations/limitations during realistic scenarios. Units produce monthly SEPT scenarios, topics, and higher headquarters special interest items using actual mishaps and incidents as baseline cases. Pilots take actions necessary to cope with the malfunction and carry it to a logical conclusion.

4.4.5.3.1. Units will incorporate the following elements into SEPT programs:

4.4.5.3.1.1. Emphasize critical action procedures (CAPs) and special interest items to include any MAJCOM, OG, and SQ special interest items related to aircraft employment. **(T-2)**

4.4.5.3.1.2. Include two EPs per phase of flight and/or major aircraft subsystem (engine, electrical, hydraulic, fuel, oxygen, landing gear, flight control and auxiliary power as applicable) during each session. The EPs will also span all phases of flight to include the role of supporting a fighter that has an emergency (checklist backup, air traffic control coordination and flight path clearance). For at least one emergency, discuss considerations for handling that emergency at night. **(T-2)**

4.4.5.3.1.3. Ensure each of the following appear at least once in the annual SEPT Program and are included in at least one of the monthly SEPT profiles: in-scenario touch and go (due to runway condition reading, vehicle on runway, canopy pooling at or near touch down, etc.), NVD SEPT with unusual attitudes, horn awareness and recovery with wing tanks, break-X interpretation and appropriate actions, brake lockup malfunction, departure of prepared surface above taxi speed, emergency at/around takeoff speed, and high-speed heavy weight abort and associated technical order guidance (take off and landing data and brake energy limits when applying max effort braking), an unintentional engine shut down scenario, airstart complications (to include hot start), engine stalls in various phases of flight, unusual attitude recovery utilizing the standby attitude indicator as the only flight instrument, no-HUD and/or standby instrument training in other phases of flight outside instrument approaches, scenarios that accurately simulate Type I and II Spatial Disorientation and subsequent loss of attitude data in the Head-up Display followed by the Attitude Direction Indicator during a critical phase of flight and in Instrument Meteorological Conditions, and embedded global positioning system/inertial navigation system (EGI) and GPS malfunctions. **(T-2)**

4.4.5.3.2. Pilots accomplish a SEPT in each calendar month. Currency expires at the end of the calendar month following the month in which the SEPT was credited, regardless of which date the SEPT was completed (e.g., if a SEPT is accomplished on 1 May, the currency is good through 30 June). SQ/CCs will ground pilots for failure to maintain currency until subsequently completed. **(T-3)** SQ/CCs may waive unaccomplished SEPTs from previous months due to non-flying temporary duty (TDY) or special circumstances.

4.4.5.3.3. Pilots may satisfy their monthly SEPT requirement by accomplishing or administering an EP SIM, an EP Evaluation, or formal course EP training.

4.4.5.3.4. Accomplish two SEPTs each training cycle with an IP or FL-certified SQ supervisor.

4.4.5.3.5. Accomplish SEPTs in the best available device. If no device is available, SEPTs may be accomplished in a table-top format, one-on-one, or in small flight-sized groups, as long as all members participate fully and share equal time responding to emergency situations.

4.4.6. **Flight Training** . Flying requirements are outlined in the current RTM.

4.4.7. **Regression** . See the RTM for live fly and SIM lookback requirements. Reference **Figure 4.1** for necessary decisions/actions to maintain/regain CMR/BMC status. If a pilot does not meet lookback requirements throughout the training cycle, the SQ/CC can either regress the pilot to N-CMR/N-BMC, remove the pilot from a CMR/BMC manning position, or initiate action to remove the pilot from active flying status.

4.4.7.1. **MQT Completion** . Lookback computation begins following completion of MQT. One-month lookback starts the first full month of CMR/BMC status. Post-MQT sorties flown during the month of MQT completion may be used at the SQ/CC discretion for three-month lookback.

4.4.7.2. Pilots regressed to N-CMR/N-BMC accomplish the following events (documented in gradebook) in order to regain CMR/BMC status:

4.4.7.2.1. Up to Three Months. The pilot completes a SQ/CC approved recertification program. Additionally, the pilot regains all expired currencies affecting CMR/BMC and meets RTM lookback requirements. **(T-3)**

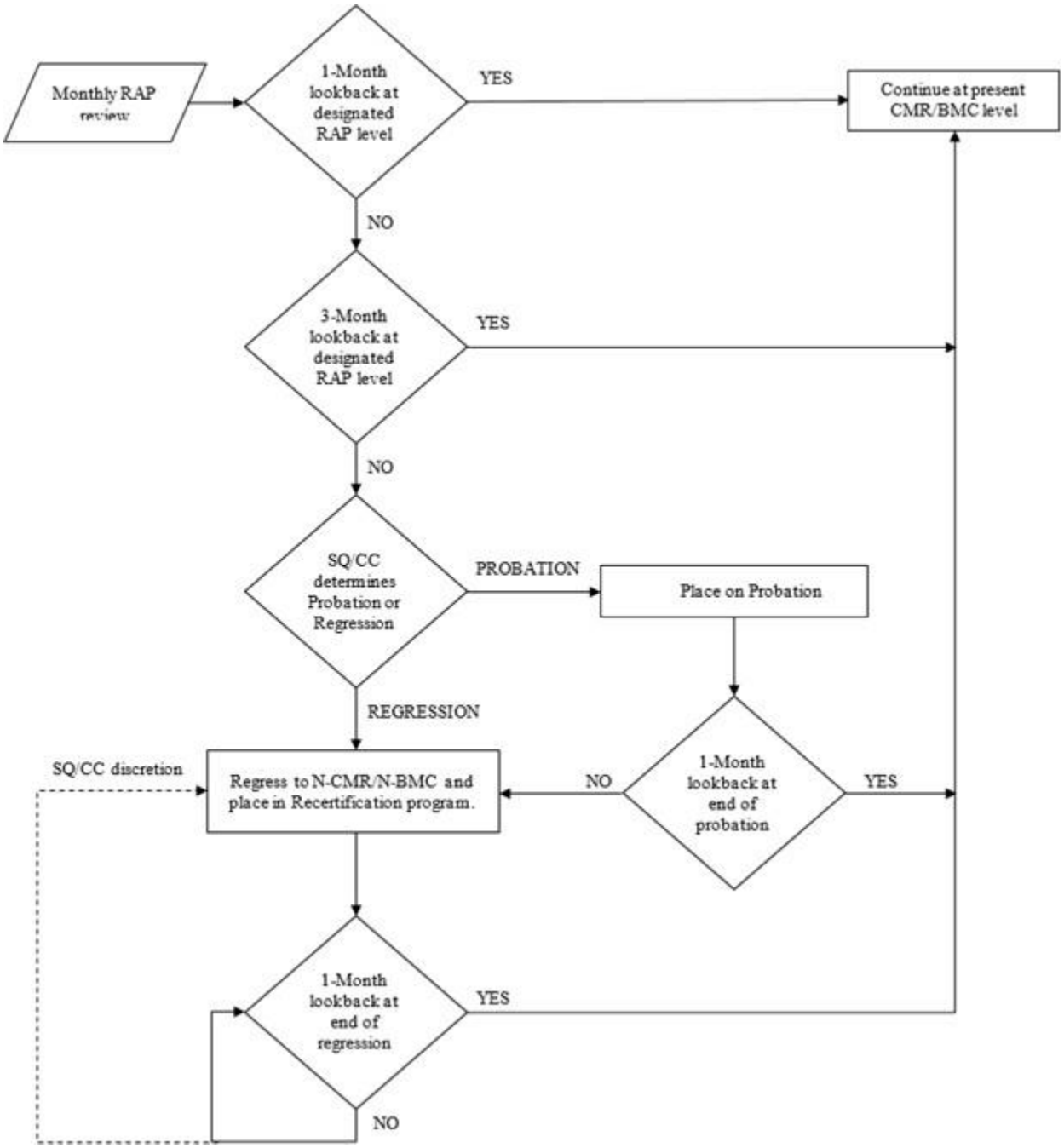
4.4.7.2.2. Three to Six Months. Requirements in **paragraph 4.4.7.2.1**, plus standardization and evaluation office generated open and closed book written examinations. **(T-3)**

4.4.7.2.3. Over Six Months. Re-accomplish MQT program **(T-3)** IAW **Chapter 3**.

4.4.7.3. Failure to Maintain Weapons Proficiency. Pilots who fail to maintain weapons RAP requirements at the end of the training cycle are required to regain proficiency in the deficient weapons event IAW **Chapter 5**. Events accomplished for regaining proficiency may count toward the cumulative CT event proficiency required at the end of the training cycle.

4.4.7.4. Flight Evaluation Failure. Pilots who fail a flight evaluation are handled IAW AFMAN 11-202V2 and AFMAN 11-2F-16V2 and regress to N-CMR/N-BMC as applicable, until requalification is complete and recertified by the SQ/CC.

Figure 4.1. Regression Flow Chart.



4.4.8. **EOC Requirements** . Pilots who fail to complete RAP mission or event requirements by the end of training cycle may require additional training depending on the type and magnitude of the deficiency. Refer to **paragraph 4.4.9** for proration guidance. In all cases, report training shortfalls as outlined in the RTM instructions.

4.4.8.1. Pilots who fail to meet EOC mission and/or event requirements may continue CT as CMR/BMC as determined by lookback. The SQ/CC determines if additional training is required.

4.4.8.2. Failure to accomplish missions/events required for special capabilities or certifications/qualifications IAW **Chapter 6** and the RTM may result in the loss of that certification or qualification as determined by the SQ/CC. The SQ/CC determines if any additional training is required to address shortfalls.

4.4.9. **Proration of EOC Requirements** .

4.4.9.1. The SQ/CC may prorate training requirements when duty not including flight, emergency/consecutive overseas tour leave, non-flying TDYs/exercises, or non-flying combat/contingency deployments preclude training for a portion of the training cycle. Loss of training due to ordinary annual leave will not result in proration. SQ/CCs may consider proration due to poor weather that precludes the unit from flying for more than one-half of the monthly scheduled flying days. For ARC units, proration is allowed for mandatory training required by civilian employment; and EOC proration is permitted for documented attrition, such as higher headquarters or weather cancels, maintenance non-delivery, ground aborts, in monthly increments when the total number of occurrences ranges from one-half to one times the pilot's normal monthly rate of flying.

4.4.9.2. SQ/CCs only prorate requirements to adjust for genuine circumstances of training non-availability – not to mask training or planning deficiencies.

4.4.9.3. Proration is based on cumulative days of non-availability for flying during the training cycle. Use **Table 4.2** to determine the number of months to prorate based on cumulative calendar days of non-availability.

4.4.9.4. Training requirements for newly assigned pilots achieving CMR/BMC after the 15th of the month start on the first day of the following month.

4.4.9.5. If MQT is re-accomplished, a pilot's training cycle will start over at a prorated share following completion of that training IAW **paragraph 4.4.9.4**.

4.4.9.6. Do not prorate any requirement below one. Prorated numbers resulting in fractions of less than 0.5 will be rounded to the next lower whole number (one or greater).

4.4.9.7. Night and AAR requirements accomplished during MQT may be credited toward prorated CT requirements if accomplished during the cycle in which the pilot was declared CMR/BMC.

4.4.9.8. A pilot's last month on station prior to departure for permanent change of station may be prorated provided one month's proration is not exceeded. Individuals scheduled to depart may be considered CMR for reporting purposes during a period of 60 days from date of last flight, or until loss of CMR currency, port call date, or sign in at new duty station, whichever occurs first.

4.4.9.9. CMR pilots who attend USAFWS in TDY-and-return status may be reported throughout the TDY as CMR. Upon return, those pilots will accomplish a prorated share of mission and event requirements.

4.4.9.10. **Contingency Operations** . Commanders follow proration guidance as outlined in the RTM. For ARC units, individuals deployed for more than a seven-day period may prorate a one-month portion of RAP missions and events.

4.4.9.11. SQ/CCs may prorate unit training requirements when a pilot is assigned to the unit following completion of a formal course (IQ, TX, or officer course) IAW **paragraph 4.4.9.4** and halfway or more through the training cycle. The intent is to provide a realistic assessment of unit training requirements for the remainder of the training cycle and a prediction of potential RAP training shortfalls. SQ/CCs also prorate unit training requirements at the end of the training cycle to accurately report EOC training shortfalls and assign additional training if required.

4.4.9.12. **Proration Example** . A pilot was granted 17 days of emergency leave in January and attended professional military education in residence from March through April for 56 consecutive calendar days. The SQ/CC authorized a total of two months proration from his/her training cycle (17 days of emergency leave plus 56 days for non-flying TDY = 73 cumulative days of non-availability for flying).

Table 4.2. Proration Allowance.

Cumulative Days of Non-flying	Months of Proration Allowed
0 - 15	0
16 - 45	1
46 - 75	2
76 - 105	3
106 - 135	4
136 - 165	5
166 - 195	6
196 - 225	7
226 - 255	8
266 - 285	9
286 - 315	10
316 - 345	11
346 - 365	12

4.5. Test/Training/Aggressor-coded Units.

4.5.1. Pilots assigned or attached to test/training/aggressor-coded units will fly at the BMC rate (see RTM table) at a minimum and should meet monthly flying-lookback. **(T-3)** Sorties should be IAW the unit's mission as determined by the SQ/CC, but must fulfill RTM AHC/instruments requirements, which will be applied toward lookback. Any RAP mission listed in the RTM also counts towards lookback. Apply regression decisions/actions as described in **paragraph 4.4.7** and **Figure 4.1**. SQ/CCs will ensure IPs are current and qualified in all events they instruct. **(T-3)** Failure to maintain an individual currency does not affect IP status, but requires additional training as determined by the SQ/CC prior to instructing that

event. For test-coded units, SQ/CCs may designate IPs as initial cadre to instruct new events under an approved test plan.

4.5.2. **Ground Training** . SQ/CCs may reference the RTM Ground Training table to develop their ground training plan.

4.5.3. **SIM Training** . MTC RAP requirements do not apply, with the following exception: each pilot must accomplish one graded or evaluated (IAW AFMAN 11-202V2 and AFMAN 11- 2F-16V2) EP simulator per year. **(T-2)** Part task training devices and cockpit mock-ups are not acceptable. All pilots accomplish SEPTs IAW **paragraph 4.4.5.3**. **(T-2)**

4.5.4. **Flight Training** . SQ/CC directed.

4.5.5. **Weapons Events** . Maintain appropriate weapons delivery certifications as outlined in the RTM Flight Training - Weapons Certifications Requirements table.

4.5.6. MSN and INSTM/QUAL (initial and requalification) evaluations are conducted as applicable, IAW AFMAN 11-202V2 and AFMAN 11-2F-16V2.

4.5.7. 83d Fighter Weapon Squadron (83 FWS) pilots maintain ACBT currency. They fly in the rear cockpit of aircraft participating in weapons system evaluation program at the discretion of 83d Fighter Weapon Squadron Commander (83 FWS/CC).

4.5.8. **Visits/Deployments** . Only qualified USAFWS instructors will be sent on weapons school visits/deployments. During visits, USAFWS instructors may perform FL and instructor duties during tactical missions. When flying with students during deployments to FTUs, USAFWS IPs will occupy the front cockpit.

4.6. Special Categories.

4.6.1. **Flight Surgeon and Ground Liaison Officer** . SQ/CCs will ensure ground liaison officers fly with a FL. Flight surgeon flight rates and requirements will be IAW AFMAN 11-202V1/2.

4.6.2. **API-8 Pilots** . API-8 pilots designated as BMC will strive to fly at the BMC rate; however, they are exempt from non-grounding academic ground training, night AAR, combat survival training, and ACBRN training. Additionally, API-8 pilots designated as BMC are not required to complete BMC-specific missions/events or meet RTM lookback requirements. Submit qualification and/or authorization documentation to the supporting SQ/CC or authorized representative prior to flying with that squadron. IPs may perform instructor duties with the concurrence of the OG/FG/CC, if current and qualified in the applicable mission and events.

4.7. Multiple Qualification/Currency.

4.7.1. See AFMAN 11-202V1 and AFMAN 11-202V2 for guidance on authorization to obtain multiple qualification. This does not apply to variants of the F-16 which are considered the same MDS. See **Chapter 6** for conversion/block differences training. Submit multiple qualification requests through command channels to MAJCOM/A3 (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D). All requests must contain full justification. **(T-2)** Approval for multiple qualification requests must be provided to the appropriate host aviation resource management office; flights are not authorized until aircraft assignment is updated in ARMS. **(T-2)** Individually authorized multiple qualifications are valid as long as the individual

is assigned to the specific position and aircraft requested, or rescinded by MAJCOM/A3 (ANG to NGB/A2/3/6/10O; AFR to AFRC/A3D).

4.7.2. Multiple qualifications are not appropriate for senior wing supervisors of units with different types of aircraft. WG/CCs will qualify in only one of their wing's aircraft. **(T-2)** Either the WG/vice commander or OG/CC should qualify in another of the wing's aircraft (not the same aircraft selected by the WG/CC).

4.7.3. **Multiple Requirements** . Pilots will satisfy at least 50 percent of the sortie requirements in their primary aircraft. **(T-2)** If CMR, they will meet all RAP mission and event requirements of the primary aircraft. **(T-3)** In addition, pilots will fly an equitable distribution of emergency patterns, instrument sorties, penetrations, non-precision approaches, and precision approaches in each MDS to fulfill their basic skills requirements. **(T-2)**

4.7.4. **Multiple Currencies** . Pilots will comply with currency requirements for each MDS. **(T-2)**

4.8. Instruments. Instrument proficiency training includes but is not limited to: lost wingman training, briefings on how to recognize and deal with spatial disorientation, head-up display-off unusual attitude recoveries, and transition from visual to instrument conditions. It will also stress the use of primary flight reference and standby flight instruments during instrument recovery from unusual attitudes or spatial disorientation. **(T-3)**

4.8.1. Units which seldom encounter bad weather and/or night recoveries should exercise pilots and approach facilities by periodically simulating "weather day" recovery operations, as determined by the SQ/CC.

4.8.2. Pilots transferring from another MAJCOM require the theater-specific portions of the instrument refresher course before flying without a theater-experienced pilot in the formation. MQT academics and the LAO mission may satisfy this requirement.

4.8.3. RAP events may be accomplished on an instrument mission provided accomplishment does not interfere with the primary goal of instrument training. The transition from instruments to visual references should be practiced on all instrument approaches. An instrument sortie is a basic skills requirement and may be credited toward monthly RAP lookback as outlined in the RTM.

4.9. Gravitational load factor (G)-Awareness CT. Units will develop a CT program that provides feedback to pilots and ingrains a proper anti-G straining maneuver (AGSM) so that it becomes an integral part of pulling Gs. **(T-2)** This program’s intent is to make assessment of the AGSM a normal debrief item after every flight. The assessment should be done as a normal part of mission recording review while debriefing other tactical portions of the mission.

4.9.1. Use the following minimum guidance to implement the unit’s program:

4.9.1.1. Develop a program to ensure at least one tactical mission recording for each pilot is reviewed and documented each training cycle by an aeromedical specialist (i.e., flight surgeon), Aerospace Physiology Enterprise (13HX/1H0X1) personnel, and/or pilot-physician for AGSM and human factors required IAW AFMAN 11-403, *Aerospace Physiological Training Program*, and AFPAM 11-419, *G Awareness for Aircrew*. **(T-3)** Only as a last resort, SQ/CC or SQ/DO may accomplish the review.

4.9.1.2. Focus ground training/academics on technique and assessment, including a discussion of the limitations imposed on aircraft/pilot performance as a result of an ineffective AGSM. Emphasize briefing, debriefing, G-suit/aircrew flight equipment differences, and assessing the proper AGSM during flight debriefs.

4.9.1.3. Include "AGSM effectiveness" on MQT and "AGSM assessment" on FLUG and IPUG grade sheets. **(T-3)** IPs should evaluate these areas on upgrade missions that involve tactical maneuvering.

4.9.1.4. FLs emphasize G-awareness during appropriate portions of the flight brief. FLs will also assess the AGSM effectiveness of flight members during mission debriefings. **(T-3)** 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. AGSM will also be evaluated under relatively low intensity G such as Air-to-Ground (A/G) sorties. **(T-3)**

4.9.2. During the mission recording review, FLs assess and debrief the pilot's AGSM. Identify pilots having poor AGSM technique or low G-tolerance to the flight commander or appropriate operations supervisor. The SQ/DO or appropriate supervisor determines what action is required to improve the pilot's G-tolerance. **(T-3)** The SQ/CC determines if commander-directed acceleration training is required IAW AFMAN 11-404, *Fighter Aircrew Acceleration Training Program*. **(T-3)**

4.10. Contested, Degraded, and Operationally Limited Operations (CDO). CDO scenario development will be included in daily training (aircraft, academics and MTC), and also be incorporated into MSN and EP evaluations. **(T-3)** Daily CT flights and MTC missions will discuss the following CDO areas in relationship to the mission's profile:

4.10.1. Contested: Electro-magnetic spectrum degradation caused by enemy action (jamming).

4.10.2. Degraded: Electro-magnetic spectrum and battlespace degradation caused by failed systems (global positioning system (GPS) degradation/denial, datalink, simple failure).

4.10.3. Operationally Limited: Reduced mission effectiveness caused by the physical or operational environment (system, force structure, rules of engagement/special instructions, etc.).

4.11. High-Angle of Attack (Hi-AoA) Training. Air Force Material Command's (AFMC's) 416 Flight Test Squadron (FLTS) has developed Hi-AoA academics and flight instruction. The training is available at Edwards AFB or 416 FLTS IPs can travel if units have access to appropriate airspace to conduct deep stall/recovery training as defined in AFMC guidance. The training purpose is to teach the pilot how to recognize, recover from, and ultimately avoid deep stalls. Pilots should receive this instruction at least once, preferably early, in their career.

Chapter 5

WEAPONS DELIVERY/EMPLOYMENT CERTIFICATION

5.1. General. This chapter outlines guidance for attaining initial weapons certification and maintaining CT proficiency in "Weapons Certification Requirements" listed in the RTM. Refer to **Attachment 2** for further guidance on weapons events.

5.2. Mission Evaluation Versus Employment Certification. A successful AF Form 8 mission evaluation qualifies a pilot to employ the member's assigned weapon system in accomplishing the unit's operational or DOC statement mission. SQ/CCs will certify pilots in employing weapons without instructor supervision. **(T-3)**

5.3. Initial Weapon Certification. Initial weapon certification can be achieved in IQT, MQT, or a combination of each. Weapons certification will carry over for consecutive tours in the MDS. In order to be designated CMR, accomplish initial certification in RTM directed "proficient" munitions.

5.3.1. Initial certification in a weapon is satisfied when a pilot has achieved a minimum of 3 hits of 6 consecutive record deliveries (see **Attachment 2**). To count as a hit, the delivery must be valid and assessable IAW AFTTP 3-1.Shot Kill, with the following addition: inert/live unguided munitions (impact within hit criteria listed for each event under **paragraph 5.5**.).

5.3.2. **Gun** . Certification is achieved by meeting the "qualified" criteria for A/A and/or A/G employment IAW AFMAN 11-2F-16V2 and may be verified through mission recording assessment of an engagement/strafe pass or via live fire.

5.3.3. **Conventional Munitions** . Certification is achieved by meeting the qualification criteria for A/G weapons employment IAW AFMAN 11-2F-16V2. There is no limit to the number of hot passes utilized to achieve initial certification.

5.3.4. **A/A Missile** . Certification is achieved by meeting the qualification criteria for missile employment IAW AFMAN 11-2F-16V2.

5.3.5. **A/G Missile** . Employment accomplished from tactical deliveries.

5.4. Continuation Training (CT) Proficiency.

5.4.1. During CT each pilot's weapons employment will be assessed for validity IAW AFTTP 3-1.IPE, *Integrated Planning and Employment* criteria and the results in each category (i.e., Air Intercept Missile (AIM)-120) will be recorded for the current training period (RAP required tasks) per the squadron weapons and tactics program (refer to DAFMAN 11-415, *Weapons and Tactics Programs*).

5.4.2. Proficiency in A/A weapons employment is maintained by achieving a 75 percent valid at pickle rate for AIM-120/9 and 75 percent valid attempt at trigger squeeze for gun. Proficiency in A/G weapons employment is maintained by achieving a 50 percent dry-pass hit criteria IAW AFTTP 3-1.IPE and AFTTP 3-1 *Shot Kill* validation (where applicable), or IAW hot pass hit criteria.

5.4.3. **Failure to Achieve Weapons PROF** . Failure to meet annual RTM weapon proficiency requirements results in the individual losing certification in that weapon. The

SQ/CC may consider regressing pilots to N-CMR/N-BMC until proficiency/familiarization is regained (see **paragraph 4.4.7**.).

5.5. Weapons Delivery Parameters. All deliveries conform to the limits established for each specific event. Pattern descriptions, procedures, training rules, and foul criteria are contained in AFMAN11-2F-16V3 and AFMAN11-214, *Air Operations Rules and Procedures*. Events performed at night may require higher minimum recovery altitudes based on AFMAN11-214 minimum altitude restrictions.

5.5.1. **Strafe Events** .

5.5.1.1. **Tactical Strafe** . Tactical strafe is a combined event. Any combination of low angle strafe and/or high angle strafe hits satisfies this training requirement. Each pass is a standalone event for weapons employment qualification with a maximum of 3 passes per sortie. Hit criteria (regardless of aircraft rounds limiter setting): acoustically scored or independently observed impacts on a point target, or bullet dispersion within 36 feet (11m) of any target.

5.5.1.2. **Low Angle Strafe** . Planned dive angle 15 degrees or less. Minimum recovery altitude is 75 feet AGL. Foul line is 2,000 feet.

5.5.1.3. **High Angle Strafe** . Planned dive angle greater than 15 degrees. Minimum recovery altitudes are 1,000 feet AGL for planned dive angles 30 degrees or less and 1,500 feet AGL for planned dive angles above 30 degrees.

5.5.2. **Unguided Munitions Events** . Unguided bomb (UGB) is a combined event. Any combination of hits from the following list of events satisfies this training requirement.

5.5.2.1. **Visual Level Delivery (VLD)** . Is a delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) using any means of delivery with visual target acquisition/designation. Minimum altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated or 200 feet AGL or range/target area restrictions, whichever is higher. Hit criteria: 130 feet (40m). A valid attack is IAW AFTTP 3-1.Shot Kill.

5.5.2.2. **Systems Level Delivery (SLD)** . Is a delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) using any means of delivery without visual target acquisition/designation. Minimum altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated or the pilot's minimum low altitude qualification or range/target area restrictions, whichever is higher. Hit criteria: 195 feet (60m). A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.3. **Low Angle High Drag** . Planned dive angle is less than 30 degrees. Minimum recovery altitude is safe escape for ordnance being simulated/delivered, or as required to recover above 100 feet AGL (300 feet on a Class B/C range or over water), or one-half the computed altitude loss from bomb release to recovery, whichever is higher. Hit criteria: 75 feet (23m) for computed deliveries; 105 feet (32m) for manual; or within the target area or impacting the vertical panel in the skip target. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.4. **Low Angle Low Drag** . Planned dive angle is less than 30 degrees. Minimum recovery altitude is safe escape for ordnance being simulated/delivered or as required to recover above 1,000 feet AGL, whichever is higher. Hit criteria: 100 feet (31m) for

computed deliveries; 175 feet (53m) for manual. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.5. **Dive Bomb** . Planned dive angle is 30 degrees or greater. Minimum recovery altitude is safe escape for ordnance being simulated/delivered, or as required to recover above 1,500 feet AGL, whichever is higher. Hit criteria: 85 feet (26m) for computed deliveries; 145 feet (44m) for manual. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.6. **High Altitude Dive Bomb** . Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 4,500 feet AGL. Hit criteria: 125 feet (38m) for computed deliveries; 250 feet (76m) for manual. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.7. **Medium Altitude Release Bomb (MARB)** . Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 7,000 feet AGL. Hit criteria: 167 feet (58m) for computed deliveries. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.8. **High Altitude Release Bomb** . Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 10,000 feet AGL. Hit criteria: 255 feet (78m) for computed deliveries; 510 feet (136m) for manual. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.9. **Low Altitude Toss** . A delivery executed from a pop-up or roll-in with less than a 10,000 feet AGL base/apex. Aircraft will not enter lateral or vertical limits of the bomb fragmentation pattern. Any system may be used for target designation and weapon release. Hit criteria is: 175 feet (53m). A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.10. **Loft Event** . A delivery which the aircraft (using appropriate aircraft systems for target acquisition, tracking and weapons release) approaches the target at low altitude, makes a definite pull-up at a given point, and releases the bomb at a predetermined point during the pull-up while maximizing standoff range or weapons effects. Minimum run-in/recovery altitude is the pilot's minimum low altitude qualification or range/target area restrictions, whichever is higher. Hit criteria: 750 feet (229m). A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.2.11. **Special Weapons Event** . A delivery which utilizes all applicable nuclear switchology to release simulated or actual ordnance. Minimum altitude is safe separation for ordnance being delivered/simulated, the pilot's minimum low altitude qualification or 100 feet AGL, whichever is higher. Hit criteria: Based on the delivery method used.

5.5.3. Precision Guided Munition Events.

5.5.3.1. **Laser Guided Bomb (LGB)** . An event in which a combat/training laser is employed to self-lase simulated/actual ordnance during an LGB delivery. Minimum recovery is safe escape/fuse arm/guide time required for the ordnance being simulated/delivered. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.3.2. **Inertially Aided Munition (IAM)** . An event in which an aircraft system is used to determine release parameters. Simulated or actual delivery of ordnance is required. Minimum recovery is safe escape for the ordnance being simulated/delivered. A valid attack is IAW AFTTP 3-1.*Shot Kill*.

5.5.3.3. **Guided Bomb Unit-54 Laser Joint Direct Attack Munition (JDAM)** . For weapons qualifications purposes, laser JDAM will be counted towards either an LGB or IAM event, depending on the mode of terminal guidance. If the bomb receives terminal

laser guidance, it is an LGB event. Bomb-on-coordinate (BOC) deliveries (without terminal laser guidance) are IAM events.

5.5.3.4. **Air-to-Ground Missile-88 High Speed Antiradiation Missile (HARM)** . Maneuver as required to achieve weapon employment. Acquisition and launch may be performed from a level, climbing, or diving maneuver to achieve firing parameters. A maximum of 4 HARM Targeting System and 4 HARM-as-sensor shots may be credited toward qualification per mission. 4 HARM-as-sensor shots per training cycle must be with a captive air training missile. Hit criteria: valid launch (actual or simulated) IAW AFTTP 3-1.*Shot Kill* at pickle as determined by mission recording review.

5.5.4. **Laser Guided Rocket and Unguided Rocket Events** .

5.5.4.1. **Tactical Rockets (TAC RX)** . is a combined event. Any combination of high/low altitude tactical rockets and/or loft rockets hits satisfies this training requirement. Hit criteria applies to controlled deliveries only. Impromptu target marking should be validated by the timeliness and effectiveness of rocket impact for fighters to locate the target.

5.5.4.2. **Low Altitude Tactical Rockets.** A tactical delivery from a dive angle of 0 to 30 degrees; minimum recovery altitude 1,000 feet AGL. Hit criteria: 1000 feet (300m).

5.5.4.3. **High Altitude Tactical Rockets** . A tactical delivery from a dive angle of 30 to 45 degrees; minimum recovery altitude 4,000 feet AGL. Hit criteria: 500 feet (152m).

5.5.4.4. **Loft Rockets (LR)** . A tactical delivery from level to 45 degrees of climb; minimum recovery altitude 300 feet AGL. Hit criteria: 1650 feet (500m).

5.5.5. **Air-to-Air Weapons Events** . AIM-9/AIM-120/A/A GUN Hit criteria is IAW AFTTP 3-1.Shot Kill and/or this volume as applicable. Reference paragraphs **5.3** and **5.4**.

5.6. Full Scale/Live Ordnance. Full scale weapons delivery (FSWD) and live ordnance training is essential to pilot combat capability. Each pilot should be given the opportunity to deliver/employ as many types of weapons inventoried on the unit committed munitions list as possible. Delivery of live or inert ordnance representing a typical combat configuration in a tactical scenario qualifies as a FSWD event. Only one event per weapon type may be logged per sortie. See the RTM for additional FSWD requirements.

Chapter 6

SPECIALIZED TRAINING

6.1. General. This chapter outlines upgrade training programs for special capabilities, certifications, and qualifications. These programs are intended to provide a basic starting point and may be modified by the SQ/CC based on the unit's requirements and/or the upgradee's previous experience, qualifications, and documented performance. Unless governed by a formal syllabus, ground and device training for these programs consists of unit-developed academics and scenarios. Conduct flight training IAW a program approved by the SQ/CC.

6.1.1. Prior to any certification, the SQ/CC personally interviews the UP and reviews responsibilities, scope of duties, authority, and philosophy. The SQ/CC approves the new status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of X's, etc.).

6.1.2. Units review the progress of each UP for trends and common errors.

6.1.3. Unaccomplished Tasks. Scheduled training events unaccomplished need not delay certification/qualification. In such cases, the SQ/CC certifies individuals with appropriate limitations to preclude performance of duties in which training is incomplete (e.g., AAR).

6.1.4. **Scope** . The RTM may list additional specialized training requirements.

6.2. Flight Lead Upgrade (FLUG) - Certification.

6.2.1. Initial FLUG entry is as a 2-ship/element FL until experience and proficiency warrant further progression. See **paragraph 1.6**. SQ/CCs select pilots for FLUG entry based on proficiency and experience. For converting units, OG/FG/CCs may select prior FL-certified pilots to upgrade to FL concurrent with MQT.

6.2.2. **FLUG Ground Training** . Units develop local training in the following areas:

6.2.2.1. **FL Responsibilities** . Wingman relationship, unit training objectives, and squadron responsibilities. Review of appropriate Joint/MAJCOM Instructions, AFIs, and local guidance. **(T-3)**

6.2.2.2. **Mission Preparation** . Wingman requirements and responsibilities, currencies, proficiencies, capabilities, delegation of mission planning duties, developing appropriate mission objectives, and briefing preparation. **(T-3)**

6.2.2.3. **Conduct of Flight Briefings and Debriefings** . Mission objectives, use of briefing guides and audiovisual aids, wingmen involvement, briefing techniques, debriefing/questioning techniques, mission recording review responsibilities and procedures. **(T-3)**

6.2.2.4. **Conduct of Missions** . Leadership and control of flight, flight discipline, and training rules. **(T-3)**

6.2.2.5. **Practice Briefing(s)** . Administrative items, mission tasks, and contingencies. **(T-3)**

6.2.2.6. **AGSM Techniques** . Briefing, debriefing, and mission recording assessment. **(T-3)**

6.2.2.7. **In-Flight Emergencies and Emergency Diverts** . Divert decisions as an element, support of wingman during EPs, FL responsibility and authority, minimum fuel planning, and air traffic control assistance. **(T-3)**

6.2.3. **FLUG SIM Training** . Units should incorporate MTC profiles into the FLUG to the maximum extent practicable, depending on MTC capabilities and availability.

6.2.4. **FLUG Flight Training** .

6.2.4.1. SQ/CCs ensure the following guidelines are met:

6.2.4.1.1. All FLUG training will be under the direct supervision of an IP. **(T-3)**

6.2.4.1.2. A dedicated FL certification mission will be flown with the SQ/CC or a designated representative. **(T-3)**

6.2.4.1.3. Schedule dissimilar and support assets to the maximum extent practicable.

6.2.4.2. **FLUG Missions and Events** . The following missions and events are recommended to be baseline FLUG. Missions may be flown in any order provided day training precedes respective night training. FLUG events can be accomplished anywhere in the FLUG.

6.2.4.2.1. **FLUG Events** . Day/Night AAR, instrument trail departure, radar trail recovery, threat reactions, hung ordnance recoveries, CDO, wounded bird, formation approach, and lost wingman procedures.

6.2.4.2.2. **FLUG Missions** . BFM, ACM, defensive counter air (DCA), low level (LL)/surface attack (SA), close air support (CAS), air interdiction (AI)/ offensive counter air (OCA)-attack operations (AO) (non-blocks 50/52), OCA-SEAD (blocks 50/52), and certification. See **paragraph 6.6** for night certification.

6.3. Instructor Pilot Upgrade (IPUG) – Qualification and Certification. Upgrading Instructor Pilots (UIPs) at a FTU complete the formal syllabus IPUG.

6.3.1. SQ/CCs select pilots certified as a 4-ship FL for IPUG entry based on proficiency and experience. For converting units, pilots may be designated by the OG/FG/CC for IPUG regardless of time in the new MDS.

6.3.2. **IPUG Ground Training** . UIPs complete the following unit-developed blocks of instruction prior to IP qualification. **(T-3)**

6.3.2.1. **Principles of Instruction** . Creating clear learning objectives, UP roles, instructing versus evaluating, and responsibility for UP progression.

6.3.2.2. **Techniques of Instruction** . Training objectives, UP interaction, learning environment and IP demeanor, maneuver demonstration, performance assessment, recognition and analysis of common errors, in-flight corrections and assistance, immediate IP correction versus allowing UP to recognize/correct errors, post-flight review and instruction, and setting objectives for follow-on missions.

6.3.2.3. **Conduct of flight briefings** . Mission objectives, adherence to training requirements, order of presentation, use of briefing guides and audiovisual aids, and debriefing techniques.

6.3.2.4. **Conduct of Phase Briefings** . Review of applicable phase briefings, use of visual aids, review of flying and grading standards, common UP errors, and flight preparation techniques.

6.3.2.5. **UP Grading** . Performance objectives, training standards, grading systems, determining unsatisfactory performance, and grade sheet completion.

6.3.2.6. **Practice Briefing(s)** . Administrative items and instruction of mission events.

6.3.2.7. **AGSM Techniques** . Briefing, debriefing, and mission recording assessment.

6.3.2.8. **Chase Techniques** . Techniques for flying evaluation chase to include recommended parameters to effectively determine aim point/glide path, airspeed, altitude, and the effects of level off on final. Discuss limitation of evaluation chase versus safety chase with regard to terrain/obstacle clearance.

6.3.2.9. **CRM/TEM** . Techniques for increasing airmanship, methods to improve mission effectiveness, task/risk management and prioritization, feedback, and crosscheck loops.

6.3.3. **IPUG SIM Training** . Units should incorporate MTC profiles into the IPUG to the maximum extent practicable, depending on MTC capabilities and availability.

6.3.4. **IPUG Flight Training** . Conduct flight training IAW an upgrade program approved by the OG/FG/CC.

6.3.4.1. The SQ/CC ensures the following guidelines are met:

6.3.4.1.1. All IPUG training will be under the direct supervision of an IP. **(T-3)**

6.3.4.1.2. A dedicated IP qualification mission will be flown with the SQ/CC or a designated representative. **(T-3)**

6.3.4.1.3. IPUG training objectives are based on instruction of MQT, FLUG, and specialized training. Mission scenarios reflect typical unit training missions/events and the simulation of common UP errors.

6.3.4.1.4. **Method of Instruction** . UIPs will practice assessing performance, immediately recognizing errors, and providing timely in-flight corrections. UIPs may also instruct mission tasks through maneuver demonstration as specified in the IPUG flight profile. Briefings should cover guidelines for in/out-of-scenario instruction, and methods for pausing and/or resuming the scenario, as appropriate.

6.3.4.2. **IPUG Missions and Events** . Unit programs should clearly specify which tasks the UIP demonstrates, which tasks the UIP practices evaluating the "student's" performance, and which tasks the UIP does both. The following missions and events are recommended for the baseline IPUG. IPUG events can be accomplished anywhere in the IPUG. IPUG missions: BFM, AHC, ACM, DCA, LL/SA, CAS, AI/OCA-AO (non-blocks 50/52), OCA-SEAD (blocks 50/52), and qualification. See **paragraph 6.6** for night certification.

6.4. Mission Commander (MC) Upgrade – Certification.

6.4.1. **MC Prerequisites** . SQ/CCs select pilots certified as a 4-ship FL for MC upgrade based on proficiency and experience.

6.4.2. **MC Responsibilities** .

6.4.2.1. The MC is responsible for planning, coordinating, briefing, executing, and debriefing joint/composite force employment packages. Certified MCs are authorized to lead joint/composite force training.

6.4.2.2. MCs may delegate authority and responsibility for a portion of the mission to a package commander/deputy MC.

6.4.3. **MC Ground Training** . Units develop local training in the following areas:

6.4.3.1. Review AFTTP 3-1 volumes for specific MC checklists and considerations. **(T-3)**

6.4.3.2. **Mission Planning Considerations** . **(T-3)** Airspace requirements/restrictions, air traffic control restrictions/considerations/flight plans, air refueling operations, inter-unit coordination, A/A and A/G force integration, integrated air defense system penetration/avoidance, on-range controlling agencies coordination, and command and control coordination.

6.4.4. **MC SIM Training** . Units should incorporate, as available, one MTC MC profile prior to MC certification.

6.4.5. **MC Flight Training** . The upgrading MC observes a certified MC during the planning, briefing, flight, and debriefing of at least one composite force mission prior to certification. The upgrading MC then plans, briefs, flies, and debriefs a minimum of one mission under the supervision of an MC-certified IP. Unit tasking should drive force composition, adversaries, and minimum flight size.

6.5. Low Altitude Step Down Training (LASDT) – Certification.

6.5.1. LASDT completion IAW **paragraph 6.5.5** certifies pilots to conduct LOWAT at the altitudes listed in **Table 6.1**. Category I certification is the minimum requirement for CMR status and is normally accomplished in IQT or MQT. Category II or III training may not be conducted during MQT.

6.5.2. Entry into LASDT (other than at FTU) requires SQ/CC approval. The category to which a pilot is certified is determined by the SQ/CC and based upon the lowest altitude at which all tasks can be performed and proficiency demonstrated.

6.5.3. The LASDT program is built on a multi-phase training process IAW **Table 6.1**. There is no time limit to progress beyond Category I and progress will be based upon individual pilot proficiency and training availability. SQ/CC will ensure all LASDT sorties are supervised by an instructor who is certified and current in Low A/A or Low A/G. **(T-3)**

Table 6.1. Low Altitude Step Down Training (LOWAT) Categories.

Category	Altitude Block (feet AGL)	Minimum Requirements To Certify
I	1,000-500	LASDT-1, -2, -3
II	499-300	LOWAT Cat I Certified; LASDT-4, -5, -6
III	299-100	LOWAT Cat II Certified; LASDT-7, -8, -9

6.5.4. **LASDT Ground Training** . Ground training supports the mission and concept of operations of the individual squadron. Incorporate appropriate portions of AFTTP 3-1.F-16, *Tactical Employment*, and AFTTP 3-3.F-16. Complete all ground academics prior to the flight brief and include discussion of the following:

6.5.4.1. **Low Altitude AHC** . Aircraft performance, density altitude, G-loading, power settings, level turns and bank angles, vertical maneuvering, climb/dive/slice, recoveries, terrain avoidance and ridge crossings, head-up display use, overbanking during turns, and cross check of aircraft attitude relative to horizon.

6.5.4.2. **Environmental Factors** . Cockpit visibility and field of view restrictions, sun angle, terrain, G-excess illusions/perceptions, weather considerations, air turbulence, jet wash, and bird strike.

6.5.4.3. **Task Management** . Low altitude tasks, task management and prioritization, factors influencing individual proficiency, route familiarity and complacency, and airmanship.

6.5.4.4. **Low Altitude Tactical Navigation (LATN)/Low Altitude Tactical Formation (LATF)** . Dead Reckoning, GPS/Inertial Navigation System use/techniques, tactical formations, hazards at low altitudes, task prioritization, tactical turns, and visual lookout/mutual support.

6.5.4.5. **Defensive Reactions** . Visual lookout and mutual support, threat weapons systems envelopes, threat reactions, and flight member deconfliction.

6.5.4.6. **Special Subjects** . Training rules, weather route abort procedures, aircraft emergencies, and separation/disengagement considerations.

6.5.4.7. **LOWAT Employment** . Level engagements, fuel management, required turning room, maximum dive angle restrictions, weapons employment, visual lookout, and intercepts.

6.5.5. **LASDT Flight Training** . SQ/CCs may combine and/or modify profiles as necessary, based on UP's experience. To conduct low altitude operations safely, pilots need to be knowledgeable of aircraft handling and performance characteristics, tactical formation, intercept, offensive maneuvering, defensive reactions, and navigation. **Note:** LASDT-1,4,7,8,9 are dedicated missions. At the SQ/CC discretion, LASDT-4 and -5 may be combined.

6.5.5.1. **LOWAT Category I** .

6.5.5.1.1. **LASDT-1 (Single ship w/chase or in a D-model)** . Mission objectives: Demonstrate proficiency in single-ship maneuvering between 5,000 and 1,000 feet AGL. Introduce category I operations based on AFTTP 3-3.F-16. Mission tasks consist of AHC (low altitude handling/flight qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers), G-warm up exercise, low level navigation, airspeed control, fuel management, low level turns, ridge crossings, terrain masking/maneuvering techniques for level/rolling/rough terrain, visual lookout, altitude awareness/control, attack maneuvering, practice "knock-it-offs," defensive reactions, and low altitude TI.

6.5.5.1.2. **LASDT-2 (2-ship)** . Mission objectives: Demonstrate proficiency in single-ship LOWAT cat I operations and introduce 2-ship low altitude operations down to 500

feet AGL. Mission tasks: Same as LASDT-1 only accomplished down to 500 feet AGL as UP proficiency increases.

6.5.5.1.3. **LASDT-3 (2-ship) – LOWAT Category I Certification** . Mission objectives: Demonstrate proficiency in low altitude operations down to 500 feet AGL. Mission tasks: Same as LASDT-1. **Note:** Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT CAT I.

6.5.5.2. **LOWAT Category II** .

6.5.5.2.1. **LASDT-4 (Single-ship w/chase or in a D-model)** . Mission objectives: Introduce LOWAT cat II operations. Mission tasks: Same as LASDT-1 only accomplish in the 300-500 foot AGL environment as UP proficiency increases.

6.5.5.2.2. **LASDT-5 (2-ship)** . Mission objectives: Demonstrate proficiency in single-ship LOWAT cat II operations and introduce 2-ship/element low altitude formations. Mission tasks: Same as LASDT-1.

6.5.5.2.3. **LASDT-6 (2-ship) - LOWAT Category II Certification** . Mission objectives: Demonstrate proficiency in LOWAT cat II operations down to 300 feet AGL. Mission tasks: Same as LASDT-1. **Note:** Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT CAT II.

6.5.5.3. **LOWAT Category III** .

6.5.5.3.1. **LASDT-7 (Single-ship w/chase)** . Mission objectives: Introduce LOWAT cat III operations. Mission tasks: Same as LASDT-1 minus threat reactions, only accomplish in the 100-300 foot AGL environment as UP proficiency increases.

6.5.5.3.2. **LASDT-8 (2-ship)** . Mission objectives: Demonstrate proficiency in single-ship LOWAT Cat III operations and introduce 2-ship/element low altitude formations. Mission tasks: Same as LASDT-1 minus TI/threat reaction.

6.5.5.3.3. **LASDT-9 (2-ship) - LOWAT Category III Certification** . Mission objectives: Demonstrate proficiency in LOWAT Cat III operations down to 100 feet AGL. Mission tasks: Same as LASDT-1 minus TI/threat reaction. **Note:** Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT CAT III.

6.6. Night Vision Device (NVD) – Certification.

6.6.1. **NVD** . Upon successful completion of IQT IAW formal FTU course syllabi (B-course), pilots should be NVD certified. For pilots reporting to a unit who did not complete NVD training in a formal course (e.g., TX), tailor the FTU NVD syllabus based upon individual's previous experience, qualifications, and documented performance.

6.6.2. **FL** . Certified NVD pilots who upgrade to FL need one supervised (IP) flight as a FL on NVDs before performing unsupervised NVD FL duties. This flight may be conducted at any time during or after the FLUG syllabus.

6.6.3. **IP** . A NVD Instructor must fly one supervised (IP) instructional night sortie under NVDs before performing unsupervised night instructor duties while under NVDs **(T-3)**. Multiple upgrades may be accomplished on a NVD sortie, or in conjunction with other NVD upgrades, at the SQ/CC discretion.

6.6.4. **NVD LOWAT, Low Altitude Upgrade** . All of the following tasks must be completed to allow tactical maneuvering below MSA under high illumination (altitudes in accordance with AFMAN 11-214). **(T-2)** These events may be flown during the basic NVD upgrade, as time permits, or may be combined into an additional upgrade sortie. If flown during the basic NVD upgrade, these events may be spread over multiple sorties. However, the events should be flown in order, except for low altitude weapons deliveries which can be accomplished before intercepts. Annotate events on the UP's gradesheet. **(T-2)**

6.6.4.1. Single ship low altitude tactical navigation (IP Chase).

6.6.4.2. Single ship low altitude familiarization (IP Chase) to include: a) Level hard turns. b) 30 degree pitch up/20 degree pitch down, c) threat reactions.

6.6.4.3. Low altitude tactical formations to include turns and element threat reactions.

6.6.4.4. Low altitude tactical intercepts to include: a) Low to high conversion, b) High to low conversion, c) Air to Air Missile Defense (AAMD).

6.6.4.5. Low altitude surface attack tactical weapons deliveries. Primary low altitude surface attack training will be tactical weapons delivery employing high angle strafe (HAS) demonstrating proficiency. **Note:** Pilots previously NVD LOWAT certified are still certified. Group commanders may designate a cadre of Sq Supervisors/IPs as "current" to facilitate units' certification/currency.

6.7. Functional Check Flight (FCF) – Certification.

6.7.1. **Prerequisites** . OG/FG/CCs select pilots to enter the FCF training program based on experience and proficiency.

6.7.2. **Supervision** . Unit-designated chief FCF pilot, or their representative, trains new FCF pilots and administers FCF certification flights according to local unit training programs. Minimum supervision for flight or simulator is a current and certified FCF pilot.

6.7.3. **FCF Ground Training** . Ground training includes a review of applicable technical orders and publications, including, at a minimum, DAFI 21-101, *Aircraft and Equipment Maintenance Management;* technical order (TO) 1-1-300; *Technical Manual, Acceptance/Functional Check Flight and Maintenance Operational Checks;* 1F-16-6CF-1, *Functional Check Flight Procedures, USAF Series F-16 Aircraft;* and local FCF procedures. A full-profile FCF should be flown in the MTC.

6.7.4. **FCF Flight Training** . Upon completion of the training program, the OG/FG/CC or designated representative certifies the pilot via a memorandum, placed in the pilot's training record.

6.7.5. **CT** . Establish a CT program for review of FCF techniques and procedures. Refer to **Table 4.1** for FCF currency requirements.

6.8. Forward Air Controller (Airborne) (FAC(A)) – Certification. FAC(A) upgrades should normally be conducted at the designated FAC(A) training squadron. If OG/CCs elect to conduct FAC(A) upgrades locally, training will be in accordance with the formal training syllabus. **(T-2)** **Exception:** The 16 WPS may conduct FAC(A) upgrades in accordance with the Weapons Instructor Course (WIC) syllabus.

6.9. MTC Operator Upgrade – Certification. SQ/CCs determine the number of MTC operators required to perform unit mission. The required supervision for this upgrade program is an instructor operating system (IOS)-certified instructor. The following guidelines are provided to SQ/CCs for use in developing the unit training plan to certify selected pilots to operate the MTC.

6.9.1. **MTC Operator Ground Training** . Units develop an academic training program to familiarize pilots with normal and emergency operating procedures of the IOS.

6.9.2. **MTC Operator SIM Training (Based on Simulator Capabilities)** .

6.9.2.1. **SIM Instructor SI-1, IOS Operations** . Mission initialization, CRT page review and modification, keyboard operation, light pen operation, emergency shutdown, record/playback, hard copy, performance, and procedures monitoring.

6.9.2.2. **SI-2, IOS Operations** . Tactics mission file, console-operated air intercepts and options, A/A weapons scoring, ground threats and modifications, A/G weapons scoring, surface-to-air engagement scoring, program and simulator freeze, mission parameter modifications.

6.9.2.3. **SI-3, Practical Exercise** . The MTC operator should conduct a regularly scheduled simulator mission from the IOS under supervision of an IOS-certified instructor.

6.9.3. **Certification** . Following successful completion of SI-3, the SQ/CC certifies the pilot's MTC operator status in appropriate written format (Letter of X’s, ARMS, gradesheet, etc.).

6.10. Aerospace Control Alert (ACA) – Certification. The following are guidelines to train and certify ACA tasked pilots.

6.10.1. **ACA Ground Training** . The intent of ground training is to become familiar with combatant commander specific missions/organization, authentication procedures, applicable plans, facilities locations and call signs. Include applicable air defense artillery corridor procedures, safe passage procedures, alert procedures, alert camera operations and combatant commander rules of engagement. Refer to applicable sections of AFMAN 11-214 procedures, and AFTTP 3-1.

6.10.2. **ACA SIM Training** . The intent of simulator training is to practice procedures difficult to simulate during live flight. One MTC mission dedicated to an ACA scenario including a scramble, handover, voice authentication, combat air patrol procedures, controller-directed visual identification profiles, low altitude intercepts below 1,000 feet AGL, electronic counter countermeasures intercepts, and weapons employment rules of engagement.

6.10.3. **ACA Flight Training** . The intent of flight training is to prepare pilots for intercepting all aircraft with an emphasis on low/slow flying aircraft (rotary and fixed wing) and should include one dedicated flight. Creation of realistic environment to allow full use of F-16 electronic/visual identification capabilities is essential to the conduct of low/slow-speed operations. SQ/CCs determine the depth of ground and flight training necessary prior to participating in exercises and contingency operations.

6.11. F-16 Block Differences Training. To train between all variants of the F-16, pilots must be current and qualified prior to beginning training.

6.11.1. **Block Differences Ground Training** . Academic instruction should be tailored to the pilot's previous experience and concentrates on the differences between the F-16 blocks.

Instruction will address avionics system, electrical systems, engine differences (as applicable), flight control system differences (as applicable), aircraft handling characteristics (including departure susceptibility), EPs, on board oxygen generating system (OBOGS) normal and emergency operation (if transitioning from a liquid oxygen equipped aircraft), both A/A and A/G radar modes, and cockpit layouts. If available, an AETC formal course (such as B50 course) meets the requirements for academics and device training.

6.11.2. **Block Differences SIM Training** . Pilots receive simulator training as required by previous experience. This simulator includes systems EPs, practice instrument procedures, review of radar and intercept procedures, review of air-to-ground systems, and time critical EPs. Pilots assigned/attached to units without concurrent simulators substitute two SEPTs for the simulator.

6.11.3. **Block Differences Flight Training** . Block differences training may be conducted during MQT. Pilots who do not require MQT will receive one supervised aircraft sortie. Flight briefing stresses cockpit procedures and employment techniques.

ADRIAN L. SPAIN, Lt Gen, USAF
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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

ACC/A3T F-16, *Ready Aircrew Program (RAP) Tasking Memorandum (RTM)*, updated annually

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JP 3-09.3, *Close Air Support*, 10 June 2019

TO 1-1-300; *Technical Manual, Acceptance/Functional Check Flight and Maintenance Operational Checks*, updated periodically

TO 1F-16-6CF-1, *Functional Check Flight Procedures, USAF Series F-16 Aircraft*, updated periodically

Adopted Form

AETC Form 904, *Training Summary*

AF Form 475, *Education/Training Report*

AF Form 8, *Certificate of Aircrew Qualification*

DAF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

A/A—Air-to-Air

A/G—Air-to-Ground

AAMD—Air to Air Missile Defense

AAR—Air-to-Air Refueling

ACA—Aerospace Control Alert

ACBT—Air Combat Training

ACC—Air Combat Command

ACBRN—Aircrew Chemical, Biological, Radiological, Nuclear

ACM—Air Combat Maneuvering

ACT—Air Combat Tactics

AERP—Aircrew Eye and Respiratory Protection

AF—Air Force

AFFSA—Air Force Flight Standards Agency

AFGM—Air Force Guidance Memorandum

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFR—Air Force Reserve

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFTTP—Air Force Tactics, Techniques and Procedures

AGL—Above Ground Level

AGSM—Anti-G Straining Maneuver

AHC—Aircraft Handling Characteristics

AI—Air Interdiction

AIM—Air Intercept Missile

ANG—Air National Guard

AO—Attack Operations

API—Aircrew Position Indicator

ARC—Air Reserve Component(s)

ARMS—Aviation Resource Management System

ASC—Air Strike Control

B—Basic—BAQ—Basic Aircraft Qualification

BFM—Basic Fighter Maneuvers/Maneuvering

BMC—Basic Mission Capable

CAF—Combat Air Forces

CAPs—Critical Action Procedures

CAS—Close Air Support

CA—Coded—Designated Aggressor Aircraft Unit

CB—Coded—Designated Test Aircraft Unit

CC—Coded—Designated Combat Aircraft

CC—Coded—Designated Combat Aircraft

CDO—Contested, Degraded, Operationally Limited

CMR—Combat Mission Ready

COMAFFOR—Commander, Air Force Forces

CRM—Cockpit/Crew Resource Management

CT—Continuation Training

DCA—Defensive Counter Air

DO—Operations Officer

DOC—Designed Operational Capability

DRU—Direct Reporting Unit

EOC—End of Cycle

EP—Emergency Procedure

EW—Electronic Warfare

FAC(A)—Forward Air Controller (Airborne)

FAM—Familiar

FCF—Functional Check Flight

FG—Fighter Group

FL—Flight Lead

FLUG—Flight Lead Upgrade

FOA—Field Operating Agency

FTU—Formal Training Unit

G—Gravitational—load factor

GPS—Global Positioning System

HARM—High Speed Antiradiation Missile

HAS—High Angle Strafe

Hi—AoA-High Angle of Attack

HUD—Head-Up Display

IAM—Inertially Aided Munition

IAW—In Accordance With

INSTM—Instrument

IOS—Instructor Operating System

IP—Instructor Pilot

IPUG—Instructor Pilot Upgrade

IQT—Initial Qualification Training

JTAC—Joint Tactical Attack Controller

LAO—Local Area Orientation

LASDT—Low Altitude Step Down Training

LATF—Low Altitude Tactical Formation

LATN—Low Altitude Tactical Navigation

LGB—Laser Guided Bomb

LOW—Low Altitude

LOWAT—Low Altitude Training

MAJCOM—Major Command

MC—Mission Commander

MDS—Mission Design Series

MTC—Mission Training Center

MQT—Mission Qualification Training

MR—Mission Ready

MSA—Minimum Safe Altitude

MSN—Mission

N—Non—N/A—Not Applicable

NGB—National Guard Bureau

NVD—Night Vision Device

OCA—Offensive Counter Air

OCA-AI—Offensive Counter Air – Air Interdiction

OCA-AO—Offensive Counter Air – Attack Operations

OCA-SEAD—Offensive Counter Air – Suppression of Enemy Air Defenses

OG—Operations Group

OPR—Office of Primary

PROF—Proficient

QUAL—Qualification

RAP—Ready Aircrew Program

RCP—Rear Cockpit

RDS—Records Disposition Schedule

RTM—RAP Tasking Memorandum

SEAD—Suppression of Enemy Air Defenses

SEPT—Situational Emergency Procedure Training

SIM—Simulator

SQ/CC—Squadron Commander

TAC—Terminal Attack Control

TDY—Temporary Duty

TF—Coded—Designated Training Aircraft

TI—Tactical Intercept

TX—Transition

UIP—Upgrading Instructor Pilot

UP—Upgrading Pilot

USAF—United States Air Force

USAFEI—United States Air Forces in Europe Instruction

USAFWS—United States Air Force Weapons School

WG—Wing or Wingman

WIC—Weapons Instructor Course

Office Symbols

83 FWS/CC—83d Fighter Weapon Squadron Commander

ACC/CG—Director of Air National Guard Forces Air Combat Command

ACC/A3—Air Combat Command Directorate of Operations

ACC/A3T—Air Combat Command Flight Operations Division

ACC/A3TO—ACC Flight Operations and Training Branch

ACC/TRSS—Air Combat Command Training Support Squadron

AF/A3T—Air Force Training and Readiness Directorate

AFRC/CC—Commander Air Force Reserve

AFRC/A3D—Air Force Reserve Command Combat Division

NGB/A2/3/6/10O—National Guard Bureau Combat Air Forces Division

Terms

Note—See AFMAN 11-214 for further clarification on definitions/terms throughout the following attachments. If there is a conflict, AFMAN 11-214 will take precedence.

Air Combat Training (ACBT)—A general training term that encompasses (Dissimilar) BFM, (Dissimilar) ACM, and (Dissimilar) ACT (AFMAN 11-214).

Air Combat Tactics (ACT)—Training in the application of BFM, ACM, and tactical intercept skills to achieve a tactical air-to-air objective (AFMAN 11-214).

Aerospace Control Alert (ACA)—Mission focused on intercepting low/slow-flying aircraft and traditional intercepts, with emphasis on target identification and shadowing 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 (AFMAN 11-202V1).

Basic Mission Capable (BMC)—An aircrew member who has satisfactorily completed mission qualification training, is qualified in some aspect of the unit mission, but does not maintain MR/CMR status (AFMAN 11-202V1).

Certification—Procedure used to document competency in a particular task. Not interchangeable with "qualification," which requires formal AF Form 8 documentation (AFMAN 11-202V2).

Combat Mission Ready (CMR)—An aircrew member who has satisfactorily completed MQT and maintains qualification and PROF in the command or unit combat mission (AFMAN 11-202V1).

Continuation Training (CT)—Training to maintain proficiency and improve pilot capabilities to perform unit missions. CT includes pilot proficiency sorties and upgrades not flown in IQT/MQT.

Currency—The minimum frequency required to maintain proficiency and allow safe performance of an event or mission.

Delivery Parameters—Weapons-related data reflecting current delivery considerations for proper ordnance function and tactical survivability. Appropriate aircraft/weapons technical orders must be consulted for live ordnance safe escape criteria and aircraft performance charts for recovery altitudes.

Emergency Procedures Evaluation—See AFMAN11-202V2 and AFMAN 11-2F-16V2.

Familiar—Aircrew have a basic knowledge of mission area and may make errors of omission or commission. Aircrew are able to operate in a permissive environment and are able to handle some basic contingencies and unusual circumstances. Familiar aircrew may need additional training prior to first mission tasking.

Fighter Integration (FI)-—The integration of different fighter platforms using a holistic approach designed to achieve a greater effect than would otherwise be possible independently. AFTTP 3-2.89. Assume a minimum of two fighter formations and any combination of a four-ship of F-15s, F-16s, FA-18s, or F-35s; or a two-ship of F-22s.

Flight Lead (FL)—As designated on flight orders, the pilot responsible for overall mission conduct from preflight preparation and briefing to post-flight debriefing, regardless of actual position within the formation. A 2-ship FL is authorized to lead an element in a larger formation. If approved by the SQ/CC, a 4-ship FL is considered a multi-ship FL and may lead formations and missions in excess of four aircraft.

Hot Pit—Term for an engine running aircraft refueling and/or rearming procedure where the aircraft lands, taxis to a designated location, refuels/rearms, then takes off for another mission.

Initial Qualification Training (IQT)—Training needed to qualify aircrew for basic aircrew duties in an assigned crew position for a specific aircraft, without regard for the unit's operational mission (AFMAN 11-202V1). IQT graduates demonstrate proficiency in mission tasks as indicated in the FTU syllabi.

Letter of X's—A monthly summary of assigned and attached pilots that lists qualifications and certifications. An "X" is put in the appropriate column next to the pilot name showing their qualification or certification, hence its name.

Lookback—Used to assist a commander in determining a pilot's status (CMR/BMC - Probation - N-CMR/N-BMC). Lookback reflects RAP sortie and simulator counts over 1 and 3 month periods. Reference **paragraph 4.4.7** and **figure 4.1** for lookback use in regression determination.

Mission Commander (MC)—A SQ/CC certified 4-ship FL designated to lead large force employment (see AFMAN 11-214) and joint/composite force missions.

Mission Qualification Training (MQT)—Training required to achieve the required level of competence in a unit's primary-tasked missions. This training follows IQT and is a prerequisite for CMR/BMC status. MQT provides an aircraft mission qualification certificate, and allows the pilot to prepare for follow-on specialized training.

Mission Ready (MR)—An aircrew member who has satisfactorily completed MQT and maintains qualification and proficiency in the command or unit operational mission (AFMAN 11-202V1).

Proficient—Aircrew have a thorough knowledge of mission area but occasionally may make an error of omission or commission. Aircrew are able to operate in a complex, fluid environment and are able to handle most contingencies and unusual circumstances. Proficient aircrew are prepared for mission tasking on the first sortie in theater.

Qualification—See AFMAN 11-202V2 and AFMAN 11-2F-16V2.

Specialized Training—Specialized training provides CMR/BMC pilots with advanced qualifications or certifications to support the unit's mission tasking. This training normally follows MQT as pilot skills and proficiency warrant, but may be conducted during MQT or CT, as required.

Squadron Supervisor—May include all or some of the following depending on SQ/CC certification: SQ/CC, SQ/DO, Assistant DOs, and flight CCs. (ARC: as designated by the OG/FG/CC).

Verification—A unit briefing for pilots to update and verify airmanship/flying duties (initial) or tactical knowledge (mission) required to accomplish the unit's wartime mission tasking. Verification includes initial and continuation phases in which a formal board is normally convened to assess pilot duties and/or knowledge of tactical employment.

Wingman—A pilot that has completed MQT but has not completed FLUG & achieved 4-ship flight lead certification. Has an AFSC of 11F2H.

Attachment 2

GLOSSARY OF MISSION AND EVENT DEFINITIONS

A2.1. Mission/Event Definitions.

A2.1.1. Air Interdiction/OCA-AO Mission. Mission designed to develop proficiency in AI/OCA-AO tactics. Mission elements include: Intel scenario and tactical mission planning, execution of strikers diverting, disrupting, delaying or destroying the enemy's military capabilities while negating simulated adversary aircraft which are operating within specific commit criteria (i.e., range, airspace corridor, vulnerability time), and in-flight report.

A2.1.2. Air Combat Maneuvers (ACM) Mission. 2vX training mission designed to achieve proficiency in element formation maneuvering and the coordinated application of BFM to achieve a simulated kill or effectively defend against one or more aircraft from a pre-planned starting position (AFMAN 11-214). ACM maneuvers cover training (2vX or 1vX) designed to prioritize flow priorities and signature management to achieve proficiency in element and single-ship maneuvering and the coordinated application of BFM to achieve a simulated kill or effectively defend against one or more aircraft from a pre-planned starting position.

A2.1.3. Aircraft Handling Characteristics (AHC) Mission. Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints, including, but not limited to: high/maximum Angle of Attack maneuvering, energy management, minimum-time turns, maximum/optimum acceleration and deceleration techniques and confidence maneuvers (AFMAN 11-214).

A2.1.4. Air-to-Air Refueling (AAR) Event. An AAR event requires tanker rendezvous, hook-up and transfer of fuel or stabilized dry hook-up. More than one event may be credited if receivers accomplish another rendezvous, hook-up and fuel transfer/dry hook-up.

A2.1.5. Alert Scramble Event. From an alert posture, launch on a scramble order in any tasked role. Simulated event may terminate after initial taxi. Only one event may be logged per sortie.

A2.1.6. Air Strike Control (ASC) Event. See Terminal Attack Control (TAC) Event

A2.1.7. Basic Fighter Maneuvers (BFM) Mission. 1v1 training mission designed to apply aircraft handling skills to gain proficiency in recognizing and solving range, closure, aspect, angle off, and turning room problems in relation to another aircraft to either attain a position from which weapons may be launched or defeat weapons employed by an adversary (AFMAN 11- 214).

A2.1.8. Basic Surface Attack (BSA) Mission. Training designed to achieve proficiency in air-to-surface weapons delivery events.

A2.1.9. Chaff/Flare Event. Inflight dispensing of chaff/flare during a tactical mission profile in response to an actual or simulated threat. Event requires actual release and is limited to logging of one event per engagement.

A2.1.10. Close Air Support (CAS) Mission. Mission flown with detailed coordination in support of ground forces under the positive control of a Joint Tactical Attack Controller (JTAC)/FAC(A). Mission elements include: intel scenario, tactical mission planning, interface with the Theater Air Control System/ARMY Air-Ground System network, execution against,

and weapons employment against JTAC/FAC(A)-designated targets. Except for the role of a JTAC/FAC(A), mission elements and roles may be simulated during training.

A2.1.11. Close Air Support (CAS) in Urban Terrain. CAS in urban terrain emphasizes target identification, attack axis limitations, and avoiding collateral damage in close proximity to and coordination with friendly forces.

A2.1.12. Commander (CC) Option Mission. An allotment of missions to each pilot for allocation at commander's discretion in support of training requirements and unit objectives. CC Option missions are part of the pilot's overall training cycle sortie allotment and may be designated uniquely for each pilot or generally for all in the unit.

A2.1.13. Composite Force Training. Scenarios employing multiple flights of the same or different MDS aircraft, each under the direction of its own FL, performing the same or different roles (AFMAN 11-214). Blue air sorties including multiple fighter/bomber MDSs, a command and control platform (desired for flight event), and an A/A and/or A/G threat scenario. Reference RTM for specific flight and SIM event requirements.

A2.1.14. Contingency Sortie. A sortie tasked and flown while deployed for a contingency operation. We do not conduct training during contingency operations; however, SQ/CCs will determine when pilot/aircrew can log training for contingency sorties.

A2.1.15. Counter Fast Attack Craft/Fast Inshore Attack Craft (CFF) Mission. A concept that adapts elements of Air Operations in Maritime Surface Warfare, is conducted in direct defense of maritime assets and requires increased integration between air and surface delivered fires and the movement of maritime forces. Primary consideration is rapid response to counter immediate threats and attack targets of opportunity. For more on Counter Fast Attack Craft/Fast Inshore Attack Craft, see AF Doctrine Document (AFDD) 3-04, *Countersea Operations* and AFTTP 3-2.74, *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare (AOMSW)*.

A2.1.16. Defensive Counter Air (DCA) Mission. Mission designed to develop proficiency in DCA mission tactics. Mission elements include: Intel scenario and planning; execution of tactics to detect, engage, and negate aircraft employing adversary tactics and weapons to penetrate protected airspace or target areas, and in-flight report.

A2.1.17. Degraded/Denied Comm. Inflight operations in a communication jamming environment that provides realistic effects (intervals and duration) without use of active anti-jam radios and/or effective chattermark procedures to counter jamming.

A2.1.18. Degraded/Denied Datalink. Inflight operations with degraded or denied datalink. Log only one event per sortie. In the absence of systems capable of degrading or denying datalink, the effects may be generated by turning systems OFF or SILENT.

A2.1.19. Degraded/Denied GPS. Inflight operations with degraded or denied GPS which impacts navigation and/or weapons capability at a minimum. In the absence of actual systems capable of degrading or denying GPS, the effects may be generated by selecting a non-GPS navigational aid or turning GPS OFF.

A2.1.20. Demanding Mission. Missions that task the pilot to the extent that flying currency and proficiency are most critical. Missions and events requiring demanding mission currency are: Opposed OCA-SEAD, OCA-Escort, DCA, ACM, LOWAT below 1,000 feet AGL, CAS

below 5,000 feet AGL (to include weapons delivery/recovery), opposed Surface Attack Tactics, joint/composite force training, and aerial demonstrations. SQ/CCs may add missions/events to the demanding mission list, depending on unit tasking and pilot capabilities. See Non-Demanding Mission.

A2.1.21. Dynamic Targeting A/G Event. Complete an air-to-ground attack/engagement against a target/(time sensitive target relayed/passed by an appropriate command and control asset). Targeting within a Close Air Support scenario does not meet the intent of this event.

A2.1.22. Electronic Attack A/A Event. An intercept performed against a target using active and/or passive electronic protection against attacker's radar, causing the attacker to employ EA techniques or tactics. Does not include co-channel interference.

A2.1.23. Electronic Protection A/A Event. The pilot detects an airborne threat via electronic means and reacts with appropriate maneuvers, pod/internal electronic countermeasures switchology, and/or expendables. Airborne threat training can be accomplished only with a dedicated adversary attacking from beyond visual range.

A2.1.24. Event. Unless otherwise specified in these event descriptions, units will determine the necessary parameters for fulfilling and/or logging tasked events. An event is defined in one of the following manners:

A2.1.24.1. Accomplishment of a specific training element, function, or task.

A2.1.24.2. A specific type of weapon delivery performed during a mission, defined by aircraft flight path, ordnance delivered, delivery method, or target struck.

A2.1.24.3. Expending ordnance, or simulated attack where allowed, against a target according to predetermined flight path parameters and delivery methods. A single delivery constitutes an event.

A2.1.25. Electronic Warfare (EW) Range Event. Inflight operations conducted on an EW range with fixed or mobile surface-to-air emitters operating and detection/threat reaction emphasized. Normally accomplished in conjunction with other EW-type events. The pilot detects a surface threat via electronic means and reacts with appropriate maneuvers, pod/internal electronic protection switchology and/or expendables. Missions flown against EW aggressor or mobile threat emitters placed in non-special use airspace are acceptable.

A2.1.26. Formation Approach. Begins not later than final approach fix and may terminate in a restricted low approach or low approach.

A2.1.27. Forward Air Control (Airborne) (FAC(A)) Mission. Special capability mission designed to develop proficiency in airborne forward air control of armed attack fighters in support of actual or simulated ground forces and can be flown as element lead or the supporting wingman (if FAC(A) qualified). Mission elements include: intel scenario and mission planning, actual or simulated interface with the theater air control system/U.S. ARMY air-ground system command and control network, target acquisition and identification, FAC- to-fighter brief, target marking, positive control (Type 1, 2, or 3) of ground attack fighters employing simulated or actual ordnance against designated targets, integration of ground and heliborne fire support elements (if available), identification and neutralization of enemy air defenses, battle damage assessment, and inflight report.

A2.1.28. Have Quick / Secure Voice Event. Requires proper radio configuration for HAVE QUICK / Secure Voice operation and successful utilization during tactical mission accomplishment and/or effective chattermark procedures.

A2.1.29. Instrument Mission. Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument sortie mission provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated sorties for every pilot to accomplish their basic skills requirements and maintain minimum basic skills.

A2.1.30. Low Altitude Intercept. An intercept conducted below 5,000 feet AGL.

A2.1.31. Low Altitude Training (LOWAT). Tactical training operations in a certified low altitude block, which is divided into low altitude step-down training (LASDT) categories. This tactical training does not apply to traffic pattern operations or other basic transitions through the low-altitude structure. A LOWAT event involves performing realistic, mission-oriented low altitude operations while in a LOWAT-certified low altitude block, in which pilots practice realistic reactions to air and ground threats. LOWAT is divided into two currencies/events, LOW A/A and LOW A/G.

A2.1.32. LOW A/A. Mission-oriented A/A operations while in a LOWAT certified LOWAT block (see **Table 6.1**.). Includes skills necessary to search for and engage an aerial target at low altitude offensively or defensively.

A2.1.33. LOW A/G. Mission-oriented A/G operations while in a LOWAT certified LOWAT block (see **Table 6.1**.). LOW A/G events include LATN, LATF, defensive maneuvering to avoid or negate ground threats, and low altitude weapons delivery.

A2.1.34. Moving Target LGB Attack Event. Self or buddy-lase LGB attack against a target in motion. Reference AFTTP 3-1.Shot Kill hit criteria.

A2.1.35. Moving Target Strafe Event. Tactical strafe attack against a target in motion. Both high angle strafe and low angle strafe are desired. Until AFTTP 3-1 hit criteria is available, units will develop simulated ordnance hit/miss criteria using available weapons publications (e.g., Jedi Knight Phase 3 report, tactics, techniques, and procedures in development, and USAFWS papers).

A2.1.36. Night Sortie. Sortie on which either takeoff or landing and at least 50 percent of flight duration or 1 hour, whichever is less, occur between the end of evening civil twilight and the beginning of morning civil twilight.

A2.1.37. Non-Demanding Mission. Missions that provide the pilot with the opportunity to regain basic flying proficiency after a period of non-flying. Events in this mission do not excessively task pilot skills that have been underused. Missions not included in A2.1.20. are non-demanding missions. SQ/CCs should take into account operational risk management before determining whether a mission is non-demanding depending on unit tasking and the individual’s capabilities. See Demanding Mission.

A2.1.38. OCA-ESC/Sweep Mission. Mission designed to develop proficiency in OCA escort/sweep tactics. Mission elements include: Intel scenario and tactical mission planning, execution of tactics designed to detect, engage, and negate simulated adversary aircraft which are operating within specific commit criteria (i.e. range, airspace corridor, vulnerability time), and in-flight report.

A2.1.39. OCA-SEAD Mission. Mission designed to develop proficiency in SEAD tactics. Mission elements include: Intel scenario and integrated mission planning to support force package objectives, execution of tactics to detect and negate enemy integrated air defense system, to include surface-to-air missile, anti-aircraft artillery systems, and critical integrated air defense system nodes, employing adversary tactics and weapons capabilities to disrupt force package employment/destroy package assets, and in-flight report.

A2.1.40. Red Air Mission. Mission where adversary tactics, aircraft simulation, weapon systems, and/or maneuvering is replicated in support of blue air.

A2.1.41. Sortie. An operational flight from takeoff to final full stop landing which includes a set of tasks that lead to an (airborne) objective, to include associated planning, brief, enroute, mission execution, recovery, and debrief events.

A2.1.42. Surface Attack Tactics Mission. Mission designed to develop tactical surface attack proficiency. Mission elements include: mission planning, execution with actual or simulated threats, and weapons delivery IAW unit taskings, simulating unit committed munitions list munitions, and standard conventional loads. Simulated attacks may be conducted against realistic targets IAW local restrictions.

A2.1.43. Tactical Intercept (TI) Mission. Mission designed to develop proficiency in tactical intercept tactics. Mission elements include: Intel scenario and planning, execution of tactics to engage and negate aircraft employing adversary tactics (hot and cold operations), and in-flight report.

A2.1.44. Terminal Attack Control (TAC) Event. Consists of at least one live, dry, or simulated aircraft (fixed/rotary wing) attacking a surface target. The control should follow the CAS execution template IAW JP 3-09.3, *Close Air Support*. An actual weapons release is not required. No more than one control per aircraft can be counted per CAS briefing. TAC events only apply to FAC(A) qualified pilots and are IAW current Joint Fire Support Executive Steering Committee Action Plan Memorandum of Understanding (JFS ESC AP MOU), *Joint Forward Air Controller (Airborne) (FAC(A))*. Track each TAC performed by type as defined by JFS ESC AP MOA documentation requirements. FAC(A)s should satisfy their requirements with ground units or a tactical air control party (TACP) to the maximum extent possible.

A2.2. Weapon Employment Terms.

A2.2.1. A delivery is defined as a pass at a target on which ordnance is expended or simulated and meets the criteria defining a specific weapon delivery. Weapon events are defined in **Chapter 5**. All deliveries will be recorded, but not necessarily as a record delivery. The two types of deliveries are as follows:

A2.2.1.1. Basic Delivery. A delivery using a conventional box pattern. It may be used as a record event only for initial certification. There is no restriction on the number of dry passes made before or during basic deliveries in a record event for initial certification; however, only the first two deliveries per event may count for record.

A2.2.1.2. Tactical Delivery. A delivery using patterns and techniques that minimize final flight path predictability, yet allow sufficient time for accurate weapons delivery. When a tactical delivery is flown for record, dry passes in the event are not permitted before or during the event. Wings level time on final is limited to five seconds when the aircraft will

descend below 4,500 feet AGL, except for Level, IAM, LGB, maverick, and climbing deliveries deliveries. Timing will be from completion of roll-out until initiation of weapons release and exceeding five seconds will result in gross error. All tactical deliveries will normally include recovery to egress parameters.

A2.2.2. A delivery constitutes a weapons delivery event based on two categories, record keeping (Record or Non-Record), and RAP tasking familiar and proficient (FAM and PROF), as follows:

A2.2.2.1. Record Keeping.

A2.2.2.1.1. Non-Record. Weapons delivery accomplishments not credited toward weapons proficiency provided the pilot declares “non-record” prior to beginning the event.

A2.2.2.1.2. Record. Weapons delivery scored for individual proficiency. Scoring shall be accomplished by ground, air, or mission recording (for guided weapons), as appropriate. A maximum of two record deliveries may be credited during a mission from a single run-in heading. Additional record deliveries may be accomplished from headings differing by at least 90 degrees or on different targets/ranges. Record deliveries may not be preceded by non-record deliveries in the event on the same sortie. The first two deliveries in each event will be considered record unless otherwise declared prior to the roll-in to final. Additional guidelines are:

A2.2.2.1.2.1. Basic. Must be scored on a Class A range (IAW AFMAN13-212V1, *Range Planning and Operations*).

A2.2.2.1.2.2. Tactical. A minimum of 50 percent must be accomplished on a ground scored range, except for simulated precision munition events. Remaining record hits may be air scored by reference to known distances from the target.

A2.2.2.1.2.3. Strafe. Aircraft rounds limiter is set to total number of rounds for the planned strafe events but no less than 100 rounds. A minimum of 50 rounds per strafe event must be set and expended to satisfy RAP strafe requirements.

A2.2.2.1.2.4. Laser Guided Bomb. Designator and bomber functions are accomplished simultaneously by a single aircraft using self-lase procedures. To record a complete laser guided bomb delivery using buddy-lase designation techniques, one simulated or actual weapons release and one designation must be performed, if authorized by the SQ/CC.

A2.2.2.2. RAP Tasking. See current RTM for training cycle requirements.

A2.2.2.2.1. Familiar. Weapons events tasked at FAM may be basic/tactical record deliveries. Each single hot pass counts as one delivery. Hit percentage criteria for FAM events is not specified and is tracked at unit’s discretion.

A2.2.2.2.2. Proficient. Weapons events tasked at PROF must be tactical, record deliveries. PROF tasking demonstrates the pilot's ability to put appropriate ordnance on target. Unless otherwise specified in the RTM or formal course syllabi, **Chapter 5** establishes PROF criteria for each event.

A2.2.3. Miscellaneous definitions of weapons deliveries and events.

A2.2.3.1. Dry Pass. Weapons delivery pass during which no ordnance is expended. Such dry passes prior to completion of record deliveries in an event are charged to the pilot as gross error unless the pass was dry because of safety considerations, system malfunctions, basic delivery requirements, or directed for flight integrity purposes.

A2.2.3.2. Foul. A penalty directed to a specific aircraft and pilot for actions inconsistent with established procedures or safety considerations. A foul will result in a gross error for that delivery (except non-acoustic-scored strafe that will be penalized one-half the event score). A second foul or any dangerous pass will result in mandatory expulsion from any further deliveries during that mission and a gross error score for the event. A foul will be charged IAW flying directive publications. Verbal warnings do not constitute a foul.

A2.2.3.3. Full Scale Weapons Delivery. Delivery of live or inert ordnance representing a typical combat configuration or standard conventional load in a tactical scenario.

A2.2.3.4. Gross Error. A penalty score or miss assigned to a pilot's records when a weapons delivery attempt results in: munitions impact outside the range scoring capability, a chargeable dry pass, a foul, an unintentional release, or exceeding tactical delivery time on final requirements.

A2.2.3.5. Hit. Any munitions impact within the weapons criteria established for that event. For simulated weapons employment, hits will be assessed by mission recording review.

A2.2.3.6. Multiple or Unexpected Release. More than one weapon released against the same target on a single pass or a weapon released without approval, and assessed as follows:

A2.2.3.6.1. Intentional. Predetermined multiple ordnance release. The pilot will advise the range officer prior to delivery and may designate which impact to score.

A2.2.3.6.2. System Malfunction. Undeclared multiple release caused by a verified system malfunction. Score is void after the system malfunction is verified, otherwise unintentional rules apply.

A2.2.3.6.3. Inadvertent. Unexpected ordnance release by the aircraft, uncommanded by the pilot. Impact will not be scored.

A2.2.3.6.4. Unintentional. Unexpected ordnance released due to pilot error. Scored as a gross error regardless of impact point.

A2.2.3.7. No Spot. A weapons release during which no impact was observed. No score or error will be assigned.

A2.2.3.8. Void Delivery. Weapons delivery not successfully completed due to a documented and verified weapons system malfunction, a pass aborted for safety, no spot, or circumstances beyond the control of the pilot.