BY ORDER OF THE COMMANDER
AIR EDUCATION AND TRAINING
COMMAND

AETC INSTRUCTION 21-112

23 JANUARY 2003

Maintenance

AETC CIVIL SERVICE AND CONTRACTOR AIRCRAFT MAINTENANCE TRAINING PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: HQ AETC/LGMMR
(Mr Charles Lindsey)
Along with AETCI 21-103, 23 January 2003,
Supersedes AETCI 21-103, 16 November 1998

Certified by: HQ AETC/LGM
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Pages: 51
Distribution: F

This instruction implements AFPD 21-1, *Managing Aerospace Equipment Maintenance*. It establishes objectives, standards, procedures, and responsibilities for management of the Air Education and Training Command (AETC) Civil Service Aircraft Maintenance (CSAM) and Contractor Aircraft Maintenance (CAM) Training Programs. This instruction applies to all civil service and contractor personnel who plan, conduct, administer, evaluate, and manage these programs. This instruction does not apply to Air National Guard or Air Force Reserve Command units. This instruction requires collecting and maintaining information protected by the Privacy Act of 1974 authorized by 10 U.S.C. 8013 and E.O. 9397. System of Records Notice F021 AF IL A, Core Automated Maintenance System (CAMS) applies.

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SUMMARY OF REVISIONS

This instruction contains information about the AETC CSAM and CAM training programs, previously in AETCI 21-103. However, the information has been substantially revised and must be completely reviewed.

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Chapter 1

GENERAL

1.1. Objective. The objective is to establish aircraft maintenance training policy and procedures for the directorates/operations. It provides guidance on conducting initial, recurring, and advanced training to the level required so maintenance personnel can effectively perform their jobs.

1. 2. General. The maintenance training office (MTO) is the office of primary responsibility (OPR) for aircraft maintenance training programs. The program manager/director of maintenance (PM/DOM) has the overall responsibility for all training programs within the organization or activity, and must ensure training programs are effective and completed on time to meet mission requirements.

1.3. Training Resources. The wing leadership and PM/DOM must ensure training resources are available and provided to support the MTO course requirements and to facilitate quality, realistic training. Identify aircraft, major support equipment, and special test equipment needed for training in the monthly maintenance plan, and include in the weekly and daily maintenance schedules. Commit the resources to accomplish required maintenance training in accordance with AFI 21-101, *Aerospace Equipment Maintenance Management.*

1.4 Operational Risk Management (ORM). ORM is a decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation. Consider ORM principles, concepts and techniques in the development, implementation, and application of new or existing training programs. Additional guidance can be found in AFI 90-901, *Operational Risk Management Program*, and AFPAM 90-902, *Operational Risk Management (ORM) Guidelines and Tools*.

1.5. Block Training. The objective of block training is to group as many training requirements as possible into a single training session. Initially, the training session should provide general information that everyone requires, and then reduce to the point where only certain categories of personnel are required to remain in the session. Some examples of courses taught in block training include fire extinguisher, forms documentation, corrosion control, foreign object damage (FOD), security awareness, egress, resource protection, etc.

1.6. AETC Training Detachment (TD). Utilize training detachment courses (when available) as an alternate source of training only when the training capability is clearly beyond the capability of the MTO. The MTO will develop courses (similar to TD courses) to train and qualify their workforce.

1.7. Maintenance Operating Instruction (MOI). The MTO will develop and publish an MOI that describes local policy and procedures for managing the training programs they are responsible for administering and controlling. If not already described and published in other instructions or supplements, ensure the following topics are included in the MOI:

1.7.1. Frequency and distribution of automated training products.

1.7.2. Procedures for updating the Maintenance Information System (MIS) training subsystem (CAMS/GO81/QMIS).

1.7.3. Personnel in and out-processing procedures.

1.7.4. Procedures for requesting training.

1.7.5. Duties and responsibilities of MTO personnel, if applicable.

1.8. Training Plans and Documentation. The CSAM/CAM training programs do not fall under the purview of AFI 36-2201. However, these organizations will comply with the requirements contained in the statement of work (SOW), performance work statement (PWS), AFI 21-101, the procedures outlined in their training plan as accepted by the government, and this publication.

1.9. Qualification and Certification Procedures:

1.9.1. Table 1.1 lists special requirements for certification as critical maintenance task evaluators.

1.9.2. Table 1.2 lists critical maintenance tasks, appropriate evaluators, evaluation intervals, and certifying officials.

1.9.3. Table 1.3 lists special maintenance tasks, appropriate evaluators, evaluation intervals, and certifying officials.

Table 1.1. Critical Maintenance Task Evaluators.

RULE	A	B	C	D
	If individual is to perform as	**Then he or she must be designated by**	**At least**	**And be certified by**
1	Quality Control Inspector	Supervisor	Once	QA/QC Section Chief
2	Aircraft Crash Recovery Evaluator	Supervisor	Once	Flight Manager/ Branch Chief
3	T-1/T-6/T-37/AT-38/T-38/T-43A Flight Control or Canopy Rigging Evaluator (Note)	PM/DOM	Once	Flight Manager/ Branch Chief
4	J85 Engine Rigging Evaluator (Note)	PM/DOM	Once	Flight Manager/ Branch Chief
5	Maintenance Instructor (Note)	MTO Chief	Once	Flight Manager/ Branch Chief
6	Test Facility Engine Evaluator	Test Facility Chief	Once	Flight Manager/ Branch Chief
7	Structural Evaluator	Flight Manager	Once	Flight Manager/ Branch Chief
8	Engine Run Certifier	Flight Manager	Annually	Another engine run certifier or FCF pilot

NOTE: Designated individual must successfully complete a formal training course prior to being certified to instruct the same course.

Table 1.2. Critical Maintenance Tasks.

RULE	A	B	C	D
	If individual is required to perform maintenance task of	**Then he or she must be evaluated by**	**At least**	**And be certified by**
1	T-37 tail pipe installation	Designated Evaluator	Annually	Flight Manager/ Branch Chief
2	T-6/T-37/AT-38/T-38/T-38C canopy rigging	Designated Evaluator	Annually	Flight Manager/ Branch Chief
3	T-1/T-6/T-37/AT-38/T-38/T-38C /T-43A flight control rigging	Designated Evaluator	Annually	Flight Manager/ Branch Chief
4	Aircraft crash recovery	Designated Evaluator	Annually	Flight Manager/ Branch Chief
5	T-1/T-6/T-37/ AT-38/T-38/T-38C /T-43A throttle rigging	Designated Evaluator	Annually	Supervisor
6	T-1/T-6/T-37/ AT-38/T-38/T-38C landing gear rigging	Designated Evaluator	Annually	Supervisor
7	Installed engine run by aircraft	FCF Pilot at UPT/UNT/PIT Wings	Annually	FCF Pilot
8	Installed engine run by airlift/tanker aircraft	Certifier	Annually	Certifier
9	AT-38/T-38/T-38C rotoscan inspection	NDI Lab Chief	Annually	NDI Lab Chief
10	AT-38/T-38/T-38C wing root radius eddy current inspection	NDI Lab Chief	Annually	Supervisor
11	AT-38/T-38/T-38C vertical stabilizer (forward side skin radius inspection)	NDI Lab Chief	Annually	Supervisor
12	AT-38/T-38/T-38C lower wing skin trailing edge eddy current inspection	NDI Lab Chief	Annually	Supervisor
13	AT-38/T-38/T-38C honeycomb structures inspection	NDI Lab Chief	Annually	Supervisor
14	Fastener removal kit	Designated Evaluator	Annually	Supervisor
15	Test facility engine operator	Designated Evaluator	Annually	Supervisor

Table 1.3. Special Maintenance Tasks.

RULE	A	B	C	D
	If individual is to perform maintenance task of	**Then he or she must be evaluated by**	**At least**	**And be certified by**
1	Aircraft Tow Supervisor (by aircraft) (Note 1)	Supervisor	Annually	Supervisor
2	Aircraft Tow Vehicle Operator (by aircraft)	Supervisor	Annually	Supervisor
3	Aircraft Brake Operator (by aircraft)	Supervisor	Annually	Supervisor
4	Aircraft Marshalling	Supervisor	Once	Supervisor
5	T-1/T-6/T-37/ AT-38/T-38/ T-38C/T-43A BPO (last flight of the day) (Notes 2 and 3)	QA/QC	Once	Supervisor

NOTES:
1. Must be qualified as tow member and brake operator.
2. Must successfully complete a basic post flight inspection (BPO) training course.
3. Applies to work center supervisors and selected personnel assigned to the flight line and post dock.

Chapter 2

ORGANIZATIONAL RESPONSIBILITIES

2.1. Program Manager (PM) or Director of Maintenance (DOM). The PM/DOM will ensure:

2.1.1. The MTO is the single point of contact for aircraft maintenance training matters.

2.1.2. Facilities and equipment (offices, classrooms, dedicated hangar space, etc.) are provided to the MTO in support of aircraft maintenance training programs.

2.1.3. Highly qualified maintenance technicians/instructors are assigned or attached to the MTO. Assign instructors based on the training needs of the CSAM/CAM. Personnel selected must possess superior job knowledge, experience, communication skills, and a desire to instruct.

2.2. Work Center Supervisors Responsibilities. Work center supervisors will:

2.2.1. Conduct personnel initial evaluations within 60 days of assignment to the work center.

2.2.2. Establish work center training requirements.

2.2.3. Develop a training plan that depicts how assigned personnel will be trained.

2.2.4. Ensure training programs for their organization are administered and managed.

2.2.5. Notify the MTO which tasks constitute the work center training requirements. Load work center training requirements into the MIS when the majority (51 percent or more) of personnel in the work center require the training.

2.2.6. Ensure duty related training that applies only to select personnel within a work center is individually loaded into the MIS.

2.2.7. Ensure work center training requirements identified in the MIS are reviewed and validated at least annually.

2.2.8. Identify training requirements/deficiencies to the MTO.

2.2.9. Ensure personnel requiring training are properly identified, scheduled, and released for training.

2.2.10. Coordinate all training matters, requests, or requirements through the MTO.

2.2.11. Notify the MTO of training program changes that require MIS update.

Chapter 3

MAINTENANCE TRAINING OFFICE (MTO)

3.1. Training. The MTO supervisor will ensure personnel are adequately trained to perform their duties. Provide the PM/DOM a status of training report at least every 60 days. Present the formal report as a formal briefing, written report, or combination of both. As a minimum, include the following:

3.1.1. Task qualification status.

3.1.1.1. Number of employees who are not fully position qualified.

3.1.1.1.1. New employees.

3.1.1.1.2. Employees transferred to a new position that are not yet fully qualified in the new position (may be as a result of a promotion, temporary medical condition, manning shortage, etc).

3.1.1.2. Show where employees are assigned by specialty/position and work center.

3.1.2. Scheduling effectiveness.

3.1.2.1. Total number of employees scheduled for training.

3.1.2.2. Total number of no shows (employees who are scheduled, but do not show for training).

3.1.2.3. Total number of overdues (employees are considered overdue training if they do not complete training by the due date).

3.1.2.4. Number of employees overdue.

3.1.2.5. Instructor production and utilization (by course).

3.1.2.5.1. Example: APG.

3.1.2.5.1.1. Forty-one students graduated.

3.1.2.5.1.2. 100 percent utilization (41 scheduled, 41 graduated).

3.1.2.5.2. Example: Propulsion.

3.1.2.5.2.1. Fifteen students graduated.

3.1.2.5.2.2. Ninety four percent utilization (16 scheduled, 15 graduated).

3.1.2.5.3. Example: Avionics.

3.1.2.5.3.1. Nine students graduated.

3.1.2.5.3.2. Ninety percent utilization (10 scheduled, 9 graduated).

3.2. Maintenance Training Office (MTO) Responsibilities: The MTO will:

3.2.1. Ensure the MIS is the primary system used to schedule training.

3.2.2. Serve as the OPR to provide, coordinate, and acquire training (internally or externally) for CSAM/CAM personnel.

3.2.3. Ensure timely submission of aircraft and support equipment requirements to plans, scheduling and documentation (PS&D).

3.2.4. Appoint supply custodians to manage MTO supply and equipment accounts in accordance with AFMAN 23-110, *USAF Supply Manual,* (as applicable).

3.2.5. Appoint qualified individuals for assigned (full-time) or attached (part-time) instructor duty. When trained personnel requirements (TPR) do not warrant full-time instructors, appoint attached MIs to teach specialized or unique courses. These part-time instructors are assigned to their respective sections and conduct training using approved plans of instruction (POI). As a minimum POIs are required for those critical maintenance tasks listed in Table 1.2.

3.2.6. Establish procedures with quality assurance (QA), or quality control (QC) to review QC summaries for training deficiencies or trends.

3.2.7. Identify work center training requirements.

3.2.8. Establish manual backup procedures in case of extensive MIS down time.

3.2.9. Establish procedures to ensure training completions and task qualifications/certifications are properly documented before entering into the MIS. As a minimum, MTO personnel will ensure only authorized personnel sign source documents manually or electronically.

3.2.10. Assist supervisors and trainers in preparing training plans.

3.2.11. Manage audiovisual information products within the unit.

3.2.12. Develop and maintain a training course catalog.

3.2.13. Manage the MTO testing program.

3.2.14. Manage the MIS.

3.2.15. Establish, load, change, or delete MIS course codes as required.

3.2.16. Review annually for accuracy and validity local MIS courses and course codes.

3.2.17. Establish recurring product requests with the database manager (DBM). As a minimum, the following MIS (or equivalent QMIS) products will be run:

3.2.17.1. Training Forecast (quarterly).

3.2.17.2. Training Course Code Listing (TQE) (semiannually).

3.2.17.3. Class Roster (CRT) (monthly).

3.2.17.4. Special Certification Roster (SCR) (quarterly).

3.2.17.5. Course Status Report (CSR), as required.

3.2.18. Establish, change, update, close, or delete all MTO scheduled classes in MIS.

3.2.19. Ensure instructors receive a class roster before class start date.

3.2.20. Ensure instructor and equipment availability prior to scheduled training.

3.2.21. Ensure tests maintained are properly managed, reviewed, controlled, and secured.

3.2.22. Conduct a test inventory at least annually.

3.2.23. Ensure necessary supplies, tools, equipment, classrooms, and personnel are available for scheduled MTO classes.

3.2.24. Manage the MTO's audiovisual equipment.

3.2.25. Ensure audiovisual equipment assigned to the MTO is periodically cleaned and serviced.

3.2.26. Maintain an inventory of all audiovisual programs, equipment, and written tests assigned to the MTO.

3.2.27. Maintain the following on file for at least 1 year or until no longer applicable:

3.2.27.1. Class rosters.

3.2.27.2. Course code documentation.

3.2.27.3. Monthly training documentation, for example, forecasts, training schedules, etc.

3.2.27.4. Critical or special maintenance task evaluators/certifying official, and maintenance instructor appointment letters.

3.2.27.5. Messages or memorandums, requests for temporary duty (TDY) instructor assistance, special or contractor external training requests, etc.

3.3. Management Information System (MIS) Training Subsystems. The MTO will use the MIS training subsystem to manage and administer required training programs. The goal is to use the computer to the fullest extent possible so training needs can be determined, validated, scheduled, and documented as required.

3.3.1. Do not duplicate data loaded into MIS in other automated systems or manual forms.

3.3.2. The MTO supervisor may authorize work center supervisors to update MIS for work center-conducted training. Do not authorize work center supervisors to update any training administered, controlled, or scheduled by the MTO.

3.4. Training Products. The following MIS products (or equivalent QMIS products) will be used to manage the maintenance training program.

3.4.1. Maintenance Personnel Roster (TRIC: MPL). Use to identify employee numbers, work centers, supervisors, squadrons, organization IDs, etc.

3.4.2. Training Forecast (TRIC: TMA). Use to forecast and schedule training requirements.

3.4.3. Training Course Table (TRIC: TQE). Identifies all MIS course codes, narratives, frequency, duration, etc.

3.4.4. Consolidated Training Report (TRIC: CRT). Identifies class rosters, class schedules, etc.

3.4.5. Course Status Reports (TRIC: CSR). Identifies specific course information. ***NOTE:*** Requests for course status reports from work center supervisors, ancillary training OPRs, or agencies outside the maintenance community, once produced, become the sole responsibility of the requesting individual. The MTO may retain a copy of these products for informational use as determined by MTO supervision.

3.4.6. Special Certification Roster (TRIC: SCR). Use to control and monitor certification and inspection programs. Run and distribute this product to affected work centers at least quarterly.

3.4.7. Uncompleted Event List (TRIC: UEL). Lists all training events that are uncompleted during the period of report.

3.5. Training Documents. The more commonly used maintenance training forms are:

3.5.1. AF Form 2426, **Training Request and Completion Notification**. Use to request or record training actions, and must be signed (manually or via e-mail) by the supervisor or a designated representative to be valid.

3.5.2. AETC Form 666, **Change to Inspector/Special Certification Listing.** Use to add/delete personnel to the SCR.

3.6. Annual Course Code Review. Review local MIS course codes annually. Due to the large number of course codes, review semiannually or quarterly a percentage of the course codes to ensure a 100 percent course code review is accomplished within the required time frame.

3.7. AETC Resident Course Quota and AETC TDY Instructor Assistance Procedures:

3.7.1. In addition to procedures prescribed in the Education and Training Course Advisory (ETCA), CSAM, and CAM use the following guidance:

3.7.1.1. Fully justify requests; describe why the CSAM/CAM MTO does not have the capability to provide required training; describe the mission impact if training is not provided; include a signed statement by the PM/DOM that unit funds are available to defray student/instructor TDY costs and course tuition costs (CAM only).

3.7.1.2. Additionally, requests must include the course number, title, and primary and alternate dates training is desired.

3.7.2. The CSAM will:

3.7.2.1. Submit requests for resident course quotas to the local civilian personnel flight/office for processing, and provide HQ AETC/LGMMR, 555 E Street East, Randolph AFB TX 78150-4440, an information copy.

3.7.2.2. Submit requests for AETC TDY instructor assistance to HQ AETC/LGMMR, and provide the local civilian personnel flight/office an information copy.

3.7.3. The CAMs will submit requests for resident course quotas and AETC TDY instructor assistance to the applicable administrative contracting officer (ACO) for approval and certification. Once approved, the ACO will forward the request according to the ETCA, and provide HQ AETC/LGMMR an information copy.

3.7.4. HQ AETC/LGMMR coordinates with HQ AETC/DPS and other training managers/providers (as applicable), validates the training requirement, and facilitates procuring the requested training.

3.8. MTO Course Catalog:

3.8.1. MTOs will develop and maintain a current catalog that shows available courses, course number, course duration, a brief course synopsis, and course prerequisites. The catalog should be of local design and will include, as a minimum, a listing of:

3.8.1.1. MTO courses offered.

3.8.1.2. Audiovisual programs.

3.8.1.3. Interactive courseware (ICW) and computer based training (CBT) programs.

3.8.2. Catalog distribution (may be displayed electronically on the local intranet in lieu of distributing hard copies). Provide an electronic or hard copy to each work center and to HQ AETC/LGMMR.

Chapter 4

TRAINING AND CERTIFICATION PROGRAMS

4.1. Flight Manager/Branch Chief Program. The CSAM/CAM flight managers and branch chiefs will receive systematic maintenance training tailored to their individual knowledge, experience, and unit requirements within 60 days of assignment. Program design will ensure each member has a thorough knowledge of the mission, weapon system, directives, organization, and management procedures for their assigned unit.

4.2. Test Facility Operator Training Program. Test cell evaluators will be highly qualified technicians selected by the test facility chief, and certified by the flight manager. Initial certification requires students to demonstrate proficiency to a designated test facility engine operator/evaluator after successfully completing test facility engine operator training, a written examination on the test facility and training on emergency procedures. Annual recertification is accomplished by demonstrating proficiency to the designated test facility supervisor/evaluator. Do not start, operate or test engines unsupervised until the following criteria is met:

4.2.1. Possess a thorough knowledge of, and are signed-off on, all tasks required for test facility operations.

4.2.2. Are thoroughly familiar with all directives applicable to the facilities and engines involved.

4.2.3. Receive instruction from a qualified technician in the starting and operation of the engine, and emergency procedures for the test facility.

4.3. Aerospace Ground Equipment (AGE) Operator Training Program. Operation of powered AGE, by model and type, requires initial qualification training, and a practical evaluation by AGE personnel. Upon assignment to the unit, personnel who operate AGE (except AGE personnel) must receive initial qualification training. Previous qualifications require a supervisory evaluation during the initial evaluation process. During this evaluation, the supervisor certifies that individuals are still qualified to operate the required equipment or refresher training is needed. Designated personnel conduct initial and refresher training.

4.4. Aircraft Installed Engine Run Training Program. Maintenance personnel selected for engine start and run duties must receive qualification training and be evaluated and certified according to AFI 21-118, Aircraft Operation and Movement on the Ground, and AFI 21-101. Use locally developed procedures and written tests to conduct run training.

4.5. Air Force Engineering and Technical Services (AFETS), Contractor Engineering and Technical Services (CETS) Training Program. The AFETS/CETS (also known as field service representatives (FSR) program is managed by the PM/DOM in accordance with AFI 21-110, *Engineering and Technical Services Management and Control.* Utilize AFETS/CETS personnel to the fullest extent to provide training and fully integrate them into the instructional effort for specialized systems/equipment training. The MTO will coordinate, schedule, and evaluate training provided by AFETS/CETS personnel to ensure training needs are met, and quality training is provided and documented.

4.6. Engine Borescope Training Program (All Engines). All personnel whose duties involve the use of borescope equipment will complete borescope training in accordance with AFI 21-101. Keep the number of qualified personnel to the absolute minimum required to meet actual mission requirements and ensure proficiency of designated personnel.

4.7 Engine Blade Blending Training and Certification Program. Conduct engine blade blending training and certification in accordance with AFI 21-101. Train/certify only the minimum number of personnel in blade blending procedures in order to maintain a high degree of familiarization with inspection techniques, blending, equipment and to maintain task proficiency.

4.8. Flight Control Rigging Training and Certification Program. Maintenance personnel selected for flight control rigging must receive qualification training, be evaluated by the supervisor at least annually, and be certified by the applicable flight manager/branch chief.

4.9. AFTO Form 781, ARMS Aircrew/Mission Flight Data Document. MTO will develop and administer an AFTO Form 781 series documentation training program for all on-equipment maintenance personnel that includes, as a minimum, maintenance documentation procedures, types of discrepancies constituting grounding of aircraft, procedures for clearing discrepancies, and in-processing inspection (IPI) requirements and procedures. Training should emphasize the importance of individual maintenance actions, and include automated forms and their use. Develop a MIS course code for tracking this one-time requirement.

4.10. Shop-Level Pollution Prevention Training Program. All shop level personnel and their immediate supervisors, that work with or may come in contact with hazardous material, must complete pollution prevention training in accordance with DODI 4715.4, *Pollution Prevention.*

4.11. Audiovisual Training Program. Training programs using videotapes, CBT and ICW as the primary instructional media are very effective in satisfying course objectives. The Joint Visual Information Services Distribution Activity (JVISDA) distributes DOD, Air Force, and major command videotapes through online ordering on the DAVIS web site at http://dodimagery.afis.osd.mil/**.** For assistance call DSN 795-7937, or commercial (717) 895-7937.

Chapter 5

PLAN OF INSTRUCTION

5.1. Plan of Instruction (POI) Guidance. Attachments 2 through 24 are provided for CSAM/CAM guidance, education, and use as appropriate. Use POIs to manage and conduct training programs. The POI converts task and knowledge statements identified in the course chart/training standard (CC/TS) into behavioral objectives. Each unit of instruction will have criterion objectives. Criterion objectives consist of condition, behavior and standard statement, teaching steps, CC/TS references, student measurement, duration, support materials, and guidance factors listed.

5.1.1. Ensure each POI has an orientation unit that is not measured. Limit the course orientation to a maximum of 1 hour. If necessary, give students handouts to supplement orientation and introductory material.

5.1.1.1. Cover at least the following topics:

5.1.1.1.1. Course completion criteria, and local conditions that may preclude completion of training.

5.1.1.1.2. Course overview and administration.

5.1.1.1.3. Student critique/assessment program.

5.1.1.2. The following subjects may be included if applicable to the course:

5.1.1.2.1. Conservation of energy.

5.1.1.2.2. Environmental awareness.

5.1.1.2.3. Privacy Act of 1974.

5.1.1.2.4. MIS (CAMS/GO81/QMIS).

5.1.1.2.5. Fraud, waste, and abuse.

5.1.1.2.6. Security.

5.1.1.2.7. Proper forms documentation.

5.1.2. Ensure each unit of instruction (except the orientation and graduation units) contains one or more objective, supporting teaching steps, and instructional guidance.

5.1.3. Integrate job-oriented safety, environmental issues, forms documentation, MIS inputs, the Air Force technical data system, and other publications applicable to the specialty throughout the course.

5.1.4. Print POI pages on one side only.

5.1.5. The standard POI contains the following pages:

5.1.5.1. Cover Page. The cover page may be of local design with unit aircraft or emblem.

5.1.5.2. Page A. Identifies the total number of pages, and distribution of the course control documents (CCD).

5.1.5.3. Page I. Identifies the PM/DOM or designated representative.

5.1.6. The welcome/orientation unit and course critique and graduation unit do not contain any actual content; therefore, the criterion objective, CC/TS or TS reference number, proficiency level, and measurement are not required.

5.1.7. The POI page format for each unit of instruction in which instruction actually takes place, contains the following:

5.1.7.1. Course and Block Title. Enter the same title as on the CC/TS. Abbreviate if necessary.

5.1.7.2. Unit of Instruction Title. Enter the title that corresponds to the title in Table I of the CC/TS or training standard page. The unit of instruction format for refresher, recertification, requalification, and familiarization type courses includes the following:

5.1.7.2.1. Criterion objective.

5.1.7.2.2. CC/TS or TS reference number (enter the CC/TS or TS reference number that is being satisfied by the objective).

5.1.7.2.3. Proficiency level.

5.1.7.2.4. Measurement (enter O for oral, W for written, or P for performance or a combination thereof).

5.1.7.2.5. Time.

5.1.7.2.6. Teaching steps.

5.1.7.3. Support material and guidance.

5.1.7.3.1. Student instructional materials.

5.1.7.3.2. Audiovisual aids.

5.1.7.3.3. Training equipment.

5.1.7.3.4. Training methods and time.

5.1.7.3.5. Instructional guidance. ***NOTE:*** Show support materials and guidance for each unit of instruction. Instructional guidance should include any supplemental information not included in objective or teaching steps; for example, such information as planned usage of multiple instructors, when progress checks will be accomplished, etc.

5.1.8. Unit of Instruction. Enter the title that corresponds to the title in Table I of the CC/TS. The unit of instruction format contains the following:

5.1.8.1. Criterion objective.

5.1.8.2. CC/TS reference number. Enter the CC/TS reference number that is being satisfied by the objective.

5.1.8.3. Proficiency level.

5.1.8.4. Measurement. Enter O for oral, W for written, or P for performance or a combination thereof.

5.1.8.5. Time.

5.1.8.6. Teaching steps.

5.1.8.7. Instructional guidance. ***NOTE:*** For orientation/familiarization and continuation training refresher courses not utilizing a formal measurement tool, enter "Meas: N/A."

5.1.9. POI Continuation Sheets. Center the heading COURSE CONTENT (CONTINUED) at the top of the page. Type the POI course number, block, unit, date, and page number at the bottom of the page.

5.1.10. Each unit of instruction should cover one or more criterion objective. Begin each criterion objective statement on a separate POI continuation sheet. Begin each objective within a unit of instruction at the top of a continuation sheet followed by its teaching steps and instructional guidance.

5.1.11. When outlining POIs, general outlining rules will apply. For example, if using a 1 follow with a 2, if using an "a" you must use a "b," and so forth. Refer to AFH 37-137, *Tongue and Quill*, for additional guidance. When numbering multiple blocks of instruction, start each unit of a new block of instruction with the number 1. For example, Block 1, Units 1 through 5, Block 2, Units 1 through 3, etc.

5.1.12. Time. Enter the time that corresponds to the hours shown in Table I of the CC/TS. Enter the time to the right of each objective if the unit of instruction contains more than one objective.

5.1.13. Teaching Steps. These are steps of learning, presented in statements of subject matter content or in behavioral (action) terms, which lead to the attainment of a criterion objective. Each teaching step should be directly related to and support the objective.

5.1.14. Instructional Guidance. Enter for each criterion objective to provide standardized guidance to instructors on how to develop the lesson. Do not introduce new material that should be included as teaching steps. Do not repeat teaching steps unless further explanation is required. ***NOTE:*** Insert the following instructional guidance in the course orientation for all courses that contain progress checks (PC) for task performance objectives: “The instructor will assess accomplishment of each course objective through the use of a progress checklist. The instructor is the evaluator and does not become involved in student performance unless, in the instructor's judgment, an assist should be given to prevent any violation of technical data or action that could result in personal injury, damage to equipment, or render the equipment unreliable. An instructor assist will also be given when the student is unable to

proceed toward the accomplishment of the objective due to lack of knowledge. Inform students they are being evaluated, and how many instructor assists will be allowed before each PC."

5.1.15. Special Instructions. Include any needed special instructions, for example, use of audiovisual aids, specific use of equipment, use of host technician assistance, safety precautions, environmental awareness, FOD prevention, and administration of egress checks. When students use egress equipped aircraft or cockpit configured trainers to perform course objectives, include the following statement: "The instructor will demonstrate egress safety inspection procedures during the first course objective which requires cockpit entry. The instructor will observe the student performing egress safety inspections on each additional objective requiring cockpit entry."

5.1.16. Course Critique/Assessment and Graduation: Entries shown in Attachment 18 reflect the items that are normally covered in all courses.

5.2. Course Validation Process. Validate new MTO courses and MTO courses with major revisions (a change in 20 percent or more of the criterion objectives) prior to approval. Course validation is a process by which curriculum materials, instructional procedures, training media and materials are reviewed for instructional accuracy, adequacy, suitability for presentation and training effectiveness. Validation is also a process that assesses the effectiveness of a course as it is being developed. Validation is a quality improvement tool that helps identify problems during development so revisions can be made. Validation should be done as segments, units, or as blocks are being developed. ***NOTE:*** Major revisions consist of a change of more than 20 percent of course objectives and are determined by the course developer and instructor.

5.2.1. Validation Plan. Develop a validation plan before course validation. As with any other plan, a validation plan provides curriculum developers and instructors with a roadmap for validating the course. A validation plan adds structure and credibility to the validation process. The validation plan contains the following:

5.2.1.1. Description of the course to be validated (objectives, method, and media).

5.2.1.2. Validators.

5.2.1.3. Validation procedures.

5.2.1.4. Validation schedule.

5.2.1.5. Number of tryouts to be conducted.

5.2.1.6. Number of students to be used in small group tryouts.

5.2.1.7. Sources of how results will be documented.

5.2.1.8. How problems will be resolved.

5.2.1.9. Revision schedule. ***NOTE:*** Remember, include only necessary information in the validation plan and keep it simple.

5.2.2. Develop a tentative POI and use during the course validation process. Ensure the tentative POI is reviewed by the MTO before the start date of the first validation class.

5.2.3. Ensure training conducted during validation satisfies all course proficiency codes or behavioral statements listed in the training standard. Otherwise, a training deficiency occurs.

5.2.4. As a minimum, conduct two small group tryouts (selected students) during course validation to determine if the instruction is appropriate and effective for the targeted student population. Award course credit to students upon completion of small group tryout.

5.2.5. Additionally, conduct one operational tryout on the target population. Award course credit to students upon completion of operational tryout.

5.2.6. After the validation is completed and revisions have been made, coordinate the POI through necessary agencies prior to final approval and signature.

5.2.7. Maintain validation documentation with the master CCD.

5.3. Dating of Course Control Documents (CCD). Normally the CC/TS and POI will have the same date. If changes are made to the POI and do not affect the CC/TS, only the POI will have the most current date. Dates on the CC/TS will not change. To ensure that the POI, CC/TS, and AF Form 1768 have the same dates, do not date the course control documents until coordination is complete and is ready to be signed/approved.

5.4. Numbering System for CCDs. Use a standardized numbering system for all local CCDs.

5.5. Review and Approval of CCDs:

5.5.1. All CCDs are subject to an 18-month review with the exception of deactivated courses.

5.5.2. To ensure CCDs are reviewed on time, establish a suspense file.

5.5.3. Use the AF Form 1768 to coordinate both initial and 18-month CCD reviews. An automated system may be used for coordination. Maintain printed copies of automated coordination.

5.5.4. Completed AF Forms 1768 are a permanent part of the master CCD files.

5.5.5. The MTO supervisor will sign the AF Form 1768. As a minimum, coordinate with the following individuals or offices:

5.5.5.1. Subject matter experts (SME).

5.5.5.2. Send structured maintenance training courses that provide task qualification or certification to QA/QC, PM/DOM, as applicable.

5.5.5.3. Wing safety, as determined by the MTO.

5.5.6. Once coordination is complete and the CCDs or POI have been approved, file the AF Form 1768 in the master CCD or POI. Update the course documents, as applicable, in the master CCD or POI. MTO will forward applicable course documents changes to applicable instructors.

5.5.7. If the PM/DOM or designated representative changes after the course documents have been approved, signature pages for the "CC/TS and Foreword" remain valid until the next course revision.

5.5.8. Coordinate new or revised TD CC/TS on an AF Form 1768. This ensures that work centers and other agencies review the course content for currency and accuracy.

5.5.9. Use of CCDs:

5.5.9.1. Provide each instructor with the approved CCDs for the courses he/she will teach.

5.5.9.2. The CCDs in the instructor's possession will be current and match the master file set maintained in the MTO. Instructors will personalize their copy of the teaching guide (lesson plan part two). Except as prescribed, do not write on the CCDs. Make all personalization in the teaching guide (lesson plan part two).

5.6. Test Development. The primary purpose of testing is to assess the student's attainment of the behavior specified in the objectives. To ensure tests adequately measure the objective, the performance required in the test must match the performance required in the objective. Test development should take place immediately after objectives have been written. For additional guidance on test development see AFMAN 36-2234, *Instructional System Development.*

5.6.1. When developing tests, course developers must consider several characteristics. These characteristics ensure tests measure what is intended each time they are administered. The test characteristics are validity, reliability and usability.

5.6.2. When developing written tests, test items selected will be clear, concise, and well written to minimize misunderstanding. Within AETC aircraft maintenance training, multiple-choice tests are the most used type of written test. Use matching, short answer essay, fill-in-the-blank, and true and false questions sparingly.

5.6.3. Avoid duplicate test items if possible. If circumstances limit the variety of test items supporting an objective, reword items; resequence answers or scramble items on the alternate version to deter test compromise.

5.6.4. Test booklets may be of local design and as a minimum will include:

5.6.4.1. Cover page.

5.6.4.2. Instruction page.

5.6.4.3. Control number.

5.6.4.4. Date.

5.6.4.5. Test compromise statement.

5.6.5. Number test booklets sequentially. Label one copy as the master to identify the references used to develop each test question. Also develop a master answer key. ***NOTE:*** Structure phase I and II engine run tests so emergency procedure questions are readily identifiable. For example, Part I - Emergency Procedures; Part II - Normal Engine Run Procedures.

5.7. Test Analysis. Analyze all test items to determine if there are any possible problems or trends with any of the test items.

5.7.1. To determine the validity and reliability of written test questions, accomplish an **on-going analysis** using a test analysis worksheet (Attachment 23) or an automated testing program.

5.7.2. To ensure validity and reliability of tests, analyze both primary (A) and alternate tests (B). Accomplish this by rotating the test used for each class, unless automated testing program is in use.

5.7.3. Maintain the completed test analysis worksheet or automated testing program on file.

5.8. Forms Adopted. AF Form 1256, AF Form 1768, AF Form 2426, AFTO Form 781, AETC Form 17, AETC Form 18, AETC Form 19, and AETC Form 666.

JOE F. HARRISON, Colonel, USAF
Deputy Director of Logistics

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DODI 4715.4, *Pollution Prevention*
AFPD 21-1, *Managing Aerospace Equipment Maintenance*
AFI 11-218, *Aircraft Operation and Movement on the Ground*
AFI 21-101, *Aerospace Equipment Maintenance Management*
AFI 21-110, *Engineering and Technical Services Management and Control*
AFI 36-2001, Volume 1, *Training Development, Delivery, and Evaluation*
AFI 36-2201, Volume 2, *Air Force Training Program Training Management*
AFI 36-2201, Volume 3, *Air Force Training Program On The Job Training Administration*
AFI 36-2201, Volume 4, *Managing Advanced Distributed Learning (ADL)*
AFI 36-2201, Volume 5, *Air Force Training Program Career Field Education and Training*
AFI 90-901, *Operational Risk Management Program*
AFMAN 23-110, *USAF Supply Manual*
AFMAN 36-2234, *Instructional System Development*
AFMAN 37-139, *Records Disposition Schedule* (will become AFMAN 33-322, Volume 4)
AFH 37-137, *Tongue and Quill*
AFPAM 36-2211, *Guide For Management of Air Force Training Systems*
AFPAM 90-902, *Operational Risk Management Guidelines and Tools*

Abbreviations and Acronyms

ACO—Administrative contracting officer
AETC—Air Education and Training Command
AFETS—Air Force engineering and technician services
AFH—Air Force handout
AFI—Air Force instruction
AFMAN—Air Force manual
AFPAM—Air Force pamphlet
AFPD—Air Force policy directive
AGE—aerospace ground equipment
CAM—contractor aircraft maintenance
CAMS—Core Automated Maintenance System
CBT—computer based training
CC—course chart
CCD—course control document
CC/TS—course chart/training standard
CETS—contract engineering technical service
CSAM—civil service aircraft maintenance
DBM—database manager
DOM—director of maintenance
ETCA—education and training course advisory
FOD—foreign object damage
FSR—field service representative
GO81—Core Automated Maintenance System for Mobility

ICW—interactive courseware
ISR—instructional system review
JVISDA—joint visual information services distribution activity
MIS—Maintenance Information System
MOI—maintenance operating instruction
MTO—maintenance training office
OPR—office of primary responsibility
ORM—operational risk management
PC—progress checks
PM—program manager
POI—plan of instruction
PWS—performance work statement
QA—quality assurance
QC—quality control
QMIS—Quality Management Information System
SCR—special certification roster
SME—subject matter expert
SOW—statement of work
TD—training detachment
TDY—temporary duty
TO—technical order
TPR—trained personnel requirements

Terms

Awaiting Action (AWACT)—A code used in MIS to alert personnel that training is due completion. There are two types of AWACT: AWACT with a due date and AWACT without a due date.

AWACT Without a Training Due Date—This AWACT means that initial training has not been performed.

AWACT With a Due Date—This type of AWACT indicates that training of a recurring nature is due completion. This AWACT will change to OVERDUE if not completed by the last day of the month.

Certification—The process that authorizes individuals to perform special tasks after they have been trained and demonstrated proficiency.

Course Status Report (CSR)—The CSR is a MIS background product that identifies the course status for a specific course identifier.

Consolidated Training Report (CRT)—The CRT is a MIS background product that identifies personnel scheduled for training.

Maintenance Information System—This is the approved, automated information system used to manage and track the training requirements for the organization. These may consist of CAMS, IMDS, GO81, QMIS, or another system approved by HQ AETC/LGMMR or higher headquarters.

Overdue Training—Any training listed in MIS not completed by the last day of the training due month, unless designated by other directives.

Proficient—The condition or state where a person can perform a task correctly and completely without supervision.

Qualification Training—Training designed to qualify a person in a specific duty position.

Recurring Training—Refresher training periodically required to ensure personnel are qualified.

Special Certification Roster (SCR)—Roster that identifies personnel authorized to perform critical tasks and production inspector duties.

Subject Matter Expert (SME)—A technically competent individual with broad experience in a specific job series.

Trainer—A trained and qualified person who teaches personnel to perform specific tasks through OJT methods. Also, equipment that the trainer uses to teach specified tasks.

Training Forecast (TMA)—The TMA is a MIS background product that shows the status of individual training requirements. The TMA is produced in two types -- the TMAA and the TMAAA.

TMAA—The TMAA identifies only those training items that are awaiting action, overdue, or failed.

TMAAA—The TMAAA identifies all training items loaded against each person assigned to a particular work center.

Work Center Training Requirement (WCT)—Training that is required for 51 percent or more of personnel assigned to a work center.

Attachment 2

SAMPLE - TEST COMPROMISE STATEMENT

A2.1. Warning. The material covered in this test is governed under the guidelines set forth in AETCI 21-112, *AETC Civil Service Aircraft Maintenance and Contractor Aircraft Maintenance Training Program*. Compromise of test material to include unauthorized possession of test materials or discussion of test content, is a violation of Air Force and Air Education and Training Command instructions.

A2.2. Test Compromise Situations. The following are potential compromise situations, which can occur as a result of actions taken on the part of individuals who develop, handle, administer or participate in the testing program:

A2.2.1. Reviewing, accessing or allowing review of, or access to, controlled test material by any individual not specifically authorized.

A2.2.2. Oral or written discussion concerning contents of test material with an unauthorized person.

A2.2.3. Bringing unauthorized material into the testing room.

A2.2.4. Unauthorized reproduction, copying or faxing of test material.

A2.2.5. Removing test material from the examination room without authorization.

A2.2.6. Unable to account for the location of testing materials.

A2.2.7. Storing test materials improperly.

A2.2.8. Taking or possessing materials without authorization.

A2.3. Actions to be taken in the event of a test compromise:

A2.3.1. Suspend all testing of the affected test, and gain positive control of all affected test materials.

A2.3.2. MTO supervisor will evaluate the preliminary assessment results, and report findings to the DOM or PM.

Attachment 3

SAMPLE MAINTENANCE TRAINING OFFICE COURSE CRITIQUE

Course: _____ Date: _____

Instructor: _____

Name (optional): _____ Off Symbol: _____

****

The purpose of this critique is to ascertain feedback concerning courses taught through the Maintenance Training Office. Please take a moment to furnish us with comments and suggestions, be specific with your comments, especially if you indicate a low rating. This will better enable us to provide quality training. (Please provide your name and duty phone number if you would like a reply to your comments.)

****

1 = Unsatisfactory 2 = Needs Improvement 3 = Satisfactory 4 = Excellent 5 = Outstanding

Circle One Response Only

1) THE COURSE: (1) (2) (3) (4) (5)

Did the course meet the objectives? Yes/No
Will the training provided assist you in your job? Yes/No
Did your knowledge of the subject increase as a result of the instruction? Yes/No
Should the subject matter covered be changed? Yes/No

Comments: _____
_____
_____

2) THE INSTRUCTOR/ GUEST SPEAKER (circle one): (1) (2) (3) (4) (5)

Was the instructor/guest speaker knowledgeable of the material covered? Yes/No
Did the instructor/guest speaker present a professional image? Yes/No
Did the instructor answer student's questions? Yes/No

Comments: _____
_____
_____

3) THE FACILITY: (1) (2) (3) (4) (5)

Did the facility provide an atmosphere favorable for learning? Yes/No

Comments: _____

_____

_____

4) OTHER (if applicable): (1) (2) (3) (4) (5)

Were audiovisual aids effective?	Yes/No
Were written/performance tests used to evaluate student performance effective?	Yes/No
Were test questions clearly stated?	Yes/No

Comments: _____

_____

_____

Attachment 4

SAMPLE FORMAT FOR COURSE CONTROL DOCUMENTS/AUDIOVISUAL INFORMATION PROGRAM REQUEST WORKSHEET

Course Control Document/Audiovisual Information Program Request Worksheet. This worksheet is used to justify the development of training programs and courses.

MEMORANDUM FOR _____

FROM: _____

SUBJECT: COURSE CONTROL DOCUMENTS/AUDIOVISUAL INFORMATION PROGRAM REQUEST WORKSHEET

1. The following information is provided as justification for the development of a course.

a. Why is this training needed?

(1) Directed by instruction _____

(2) Directed by higher headquarters _____

(3) Directed by the PM/DOM _____

(4) Other _____

b. What is the overall objective of this course?

c. Who is the target population?

d. How often will the course be taught?

e. Who will instruct the course?

f. Will the training be tracked in CAMS/GO81/MIS?

g. Where will the training be conducted?

h. What is the class start date?

i. When do you need the CCDs?

j. Does the course require any test to be developed?

k. Who will be the subject matter experts?

(1) NAME: _____

(2) DUTY PHONE: _____

(3) SECTION: _____

2. Please provide any additional remarks concerning request.

_____

_____

_____

_____

Signature of Requester

Attachment 5

SAMPLE FORMAT FOR COURSE CONTROL DOCUMENT (CCD) NUMBERING SYSTEM

Course Control Documents Numbering System. The following codes may be used to standardize the numbering system for all maintenance training office (MTO) course control documents:

Figure A5.1. Course Numbering System.

AC	AIRCRAFT (INCLUDES ALL ON - AIRCRAFT ACTIONS)
AV	AVIONICS MAINTENANCE TRAINING
CC	CORROSION CONTROL TRAINING
EG	EGRESS TRAINING
EM	ENGINE MANAGEMENT TRAINING
FM	FORMS MANAGEMENT TRAINING
GE	GENERAL SUBJECT TRAINING PROGRAM
MM	MUNITIONS TRAINING
SE	SUPPORT EQUIPMENT TRAINING
ST	SAFETY TRAINING
SU	SUPPLY TRAINING

EXAMPLE #1 - COURSE NUMBER

SE33/1090-191

SE	SUPPORT EQUIPMENT TRAINING
33	WING DESIGNATION NUMBER
1090	MTO TRAINING PROGRAM NUMBER
191	CAMS/GO81/MIS COURSE CODE (IF APPLICABLE)

EXAMPLE #2 - COURSE NUMBER

AC355/2A656-002

AC	AIRCRAFT
355	WING DESIGNATION NUMBER
002	CAMS/GO81 COURSE CODE (IF APPLICABLE)

Attachment 6

SAMPLE FORMAT FOR AF FORM 1768, STAFF SUMMARY SHEET

A completed AF Form 1768 is required with each set of course control documents, tests, and VI programs. Use AF Form 1768 to support these requirements.

STAFF SUMMARY SHEET

	TO	ACTION	SIGNATURE *(Surname)*, GRADE AND DATE		TO	ACTION	SIGNATURE *(Surname)*, GRADE AND DATE
1	12 LG/ MAQ	Coord		6			
2	12 LG/ MAS	Coord		7			
3	12 LG/ MA	Sign		8			
4				9			
5				10			

SURNAME OF ACTION OFFICER AND GRADE	SYMBOL	PHONE	TYPIST'S INITIALS	SUSPENSE DATE
Mr Tiongson, GS-11	MASB	487-7890	jmt	

SUBJECT	DATE
Annual Course Review: T-1A Engine Run Initial	

SUMMARY

1. **PURPOSE**: Annual review of Course Control Documents (CCDs). Request 12 LG/MA approve CCD's IAW AETCI 21-112. Request coordinating agencies review and return to 12 LG/MASB within three duty days.

2. **BACKGROUND**: The attached CCDs pertaining to the following:

a. ***Course Number***: 12 LG T-1A-001

b. ***Course Title***: T-1A Engine Run Initial

c. The CCDs for this course were reviewed by a Subject Matter Expert (SME), who acknowledged reviewing/revising the material by signing below. The review included instructional support materials such as student handouts, study guides and slides and/or films as applicable.

d. The name of the SME: Tamala Creviston, 12 MASC Signature _____

3. **SUMMARY OF CHANGES:** None

4. Please do not write on these documents. All comments and/or recommendations should be identified on the blank sheet of paper provided in this package.

5. The Maintenance Training Office Supervisor, 12th Logistics, will sign the Plan of Instruction (POI) after CCDs are approved.

6. If you have any questions concerning this document, please contact Mr Tiongson at 7-7890.

JENER M. TIONGSON, GS-11, DAF
Maintenance Training Office Supervisor

2 Tabs
1. Course Training Standard
2. Plan of Instruction

AF FORM 1768, 19840901 *(EF-V5)* PREVIOUS EDITION WILL BE USED.

Attachment 7

SAMPLE FORMAT FOR COURSE CHART/TRAINING STANDARD (CC/TS)

The CC/TS is a qualitative course control document that states the course purpose, description, identity, length, security classification, major items of equipment, and summary of the subject matter covered. The course training standard identifies specific behavior to be attained by each student.

DEPARTMENT OF THE AIR FORCE COURSE TRAINING NUMBER
WING DESIGNATION
BASE, STATE AND ZIP DATE

COURSE CHART AND TRAINING STANDARD

COURSE TITLE

1. Purpose. This course has been developed by the (UNIT DESIGNATION) and the maintenance training office in response to requirements of regulatory guidance and/or local need.

2. Course description. This course is designed to provide (AS APPLICABLE TO THE COURSE). Problem solving, interpersonal relationships, and communicative skills are integrated throughout the course. Appropriate Air Force, Air Education and Training Command instructions, and technical orders are correlated with course content. Students are given the opportunity in the classroom and on the aircraft to apply the skills and knowledge that will enable them to accomplish the required maintenance duties.

3. Qualitative requirements. The proficiency code key.

4. Attached Tables:

a. Table I, Course Chart/Training Standard (CC/TS). Provides an outline of course instructional units, training time (hours) per unit, and explanatory remarks concerning course operation. The CC/TS identifies specific behavior to be attained by each student for task/knowledge elements included in the course.

b. Table II, Course Support Resources. Identifies host/unit course user furnished equipment and other support requirements.

5. Recommendations. Comments and recommendations are invited concerning the quality of maintenance training programs and graduates. Use this CC/TS as a reference. Address correspondence to: MTO ADDRESSS.

PM/DOM, or Designated Representative
Signature Block

Attachment:

Proficiency Code Key

_____

Supersedes CC/TS: (COURSE NUMBER, DATE)
DISTRIBUTION: Listed on page "A"

Attachment 8

SAMPLE FORMAT FOR PROFICIENCY CODE KEY

The proficiency code key is used to identify the task performance and knowledge levels for a specific task or several tasks. Refer to the scale value when writing task and knowledge objectives.

Figure A8.1. Proficiency Code Key.

	SCALE VALUE	DEFINITION: The individual
TASK PERFORMANCE LEVELS	**1**	Can do simple parts of the task. Needs to be told or shown how to do most of the task. **(EXTREMELY LIMITED)**
	2	Can do most parts of the task. Needs help on the hardest parts. May not meet local demands for speed or accuracy. **(PARTIALLY PROFICIENT)**
	3	Can do all parts of the task. Needs only a spot check of completed work. **(COMPETENT)**
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. **(HIGHLY PROFICIENT)**
TASK KNOWLEDGE LEVELS*	**a**	Can name parts, tools, and simple facts about the tasks. **(NOMENCLATURE)**
	b	Can determine step- by- step procedures for doing the task. **(PROCEDURES)**
	c	Can explain why and when the task must be done and why each step is needed. **(OPERATING PROCEDURES)**
	d	Can predict, identify, and resolve problems about the task. **(ADVANCED THEORY)**
SUBJECT KNOWLEDGE LEVELS**	**A**	Can identify basic facts and terms about the subject. **(FACTS)**
	B	Can explain relationship of basic facts and state general principles about the subject. **(PRINCIPLES)**
	C	Can analyze facts and principles and draw conclusions about the subject. **(ANALYSIS)**
	D	Can evaluate conditions and make proper decisions about the subject. **(EVALUATION)**

Legend:
*A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task (for example, b or 1b)
**A subject knowledge scale may be used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks

Attachment 9

SAMPLE FORMAT FOR TABLE I COURSE CHART/TRAINING STANDARD (CC/TS)

Table I CC/TS provides an outline of course instructional units, training time, and explanatory remarks concerning course operations.

TABLE I COURSE CHART/TRAINING STANDARD

COURSE NUMBER: Locally developed.
OPR: Organization conducting the training.
COURSE SECURITY CLASSIFICATION: CLASSIFIED or UNCLASSIFIED.
COURSE LENGTH (8 HOURS/DAY): XX academic days (XX.X hrs).
EFFECTIVE DATE: Determined by the MTO**.**
INSTRUCTIONAL SYSTEM REVIEW MONTH: Established by the MTO.
ENTRY PREREQUISITES: Mandatory prerequisites or none.
INSTRUCTOR-TO-STUDENT RATIO: X: X maximum, X: X minimum.
TECHNICIAN ASSISTANCE: When the instructor-to-student ratio is exceeded for practical application, the assistance of qualified technicians/instructor will be required.
COURSE CONTENT:

COURSE MATERIAL	HOURS	PROF LVL
1. COURSE ORIENTATION AND INTRODUCTION	(0.5)	
2. ENTER UNIT OF INSTRUCTION TITLE	(XX)	
Example: **AFTO FORM 781 SYMBOLS AND DOCUMENTATION**		
a. Enter behavioral statement from objective. Make an active statement.		C
Example: Identify symbols used in forms documentation.		
3. ENTER UNIT OF INSTRUCTION TITLE (If there is only one objective in the unit, make the unit title an active statement)	(XX)	3c
Example: Document AFTO FORM 244.		
4. COURSE CRITIQUE AND GRADUATION	(0.5)	

TOTAL HOURS: XX.X

NOTE: Safety, environmental issues, corrosion identification/control, foreign object damage prevention, forms documentation, MIS input, the use of technical publications, and appropriate fraud, waste and abuse information are integrated throughout the course.

Attachment 10

SAMPLE FORMAT FOR TABLE II COURSE SUPPORT RESOURCES

Table II Course Support Resources. Table II identifies host/unit course user furnished equipment and other support requirements.

TABLE II COURSE SUPPORT RESOURCES

COURSE NUMBER:

EQUIPMENT: The MTO establishes the format for this listing. Continue on additional pages as necessary to complete.

SUMMARY OF CHANGES: Summarize Table I and Table II changes, for example, addition/deletion of training elements, equipment changes, course length changes, instructional system review results, etc.

Attachment 11

SAMPLE FORMAT FOR PLAN OF INSTRUCTION (POI) COVER PAGE

POI Cover Page. The POI cover page is the first page of the course control document. It identifies the course number and title.

Instructor Name_____ (COURSE NUMBER)

PLAN OF INSTRUCTION (POI)

(CENTER THE COURSE TITLE AS SHOWN ON COURSE CHART/TRAINING STANDARD)

(OPR)

(DATE)

FOR TRAINING PURPOSES ONLY

_____

(MTO SUPERVISOR)

APPROVAL OF LESSON PLAN

SIGNATURE&DATE	SIGNATURE&DATE
_____	_____
_____	_____
_____	_____
_____	_____

Attachment 12

SAMPLE FORMAT FOR POI "A" PAGE

POI "A" Page. The POI "A" page identifies the total number of POI pages and distribution. The POI "A" page is normally printed on the reverse side of the POI cover page.

COURSE NUMBER: From CC/TS.

CLASSIFICATION: CLASSIFIED/ UNCLASSIFIED

TOTAL NUMBER OF PAGES IN THIS PLAN OF INSTRUCTION IS XX CONSISTING OF THE FOLLOWING:

PAGE NUMBER	DATE	CHANGE NUMBER
POI Title Page	1 March 2002	Original
A page (POI Table of Contents)	1 March 2002	Original
I page (POI Cover Letter)	1 March 2002	Original
Page 1, POI Block 1, Unit 1	1 March 2002	Original
Page 2, POI Block 1, Unit 2	1 August 2002	Change 1
Page 3, POI Block 2, Unit 1	1 September 2002	Original

This Plan of Instruction (POI) is based on Combined Course Chart/Training Standard (CC/TS) Course Number: XXXXX/XXXXXX-XXX, (DATE).

Supersedes POI: COURSE NUMBER, DATE

DISTRIBUTION: Enter applicable Course Users

Attachment 13

SAMPLE FORMAT FOR POI "I" PAGE

POI "I"PAGE. Use the "I" page to identify the course purpose, design and description, student measurement and objectives. This page is normally signed by the PM/DOM to indicate their approval of the course.

DEPARTMENT OF THE AIR FORCE	PLAN OF INSTRUCTION
WING DESIGNATOR	COURSE NUMBER
BASE, STATE ZIP CODE	DATE

COURSE TITLE

1. PURPOSE. This Plan of Instruction (POI) prescribes the qualitative requirements for the (COURSE TITLE) course. Units of instruction present criterion objectives in a logical teaching sequence. The POI shows duration, correlation with the course training standard, support materials, audiovisual aids, training equipment, instructional methods, and instructional guidance.

2. COURSE DESIGN/DESCRIPTION. The instructional design for this course is (Example: GROUP PACED, SELF-PACED). This (XX.X)-hour course trains (AS APPLICABLE TO THE COURSE). Problem solving, interpersonal relationships, and communicative skills are integrated throughout the course. Appropriate Air Force, Air Education and Training Command publications, and technical orders are correlated with course content.

3. STUDENT MEASUREMENT. Criterion objectives evaluations are accomplished by performance evaluation (P), written measurement (W), oral questions (O), or a combination thereof. (AS APPLICABLE)

4. OBJECTIVES. All objectives for this course are task/knowledge oriented, and develop a skill. The standard of performance on knowledge-oriented objectives is (XX) percent on written measurement unless otherwise indicated. (AS APPLICABLE)

PM/DOM Signature Block

Supersedes Plan of Instruction: COURSE NUMBER, DATE
OPR:
DISTRIBUTION: Listed on Page "A"

Attachment 14

SAMPLE FORMAT FOR COURSE ORIENTATION AND INTRODUCTION PAGE

Orientation and Introduction Page. The orientation and introduction page is used to explain course objectives, facility requirements, and student and instructor introductions.

NAME OF INSTRUCTOR: _____
COURSE TITLE _____

(UNCLASSIFIED/CLASSIFIED, as applicable)

1. COURSE ORIENTATION AND INTRODUCTION TIME: 0.5 HR

SUPPORT MATERIAL AND GUIDANCE

Student Instructional Materials
Enter applicable information or none.

Audiovisual Aids
Enter applicable information or none.

Training Equipment
Enter applicable information or none.

Instructional Method
Lecture/Discussion.

Brief students on the following subjects:

a. Introduction.
b. Course overview.
c. Course administration and classroom policies.
d. Course completion criteria and prerequisites.
e. Student critique/feedback program.
f. Safety, security, building orientation.
g. Test compromise.

INSTRUCTIONAL GUIDANCE

Welcome students to the course. Ask students to identify themselves and briefly state their background. Explain the location of facilities such as the break room and restrooms. Inform students of the importance of the critique program, how it works, and how they can benefit from it. (ANY OTHER INFORMATION AS APPLICABLE TO THE COURSE)

PAGE____

COURSE NUMBER BLOCK UNIT DATE

Attachment 15

SAMPLE FORMAT FOR POI UNIT 2

POI Unit 2. The Unit 2 and following units page identify the second unit of instruction as identified on the course chart/training standard.

PLAN OF INSTRUCTION

NAME OF INSTRUCTOR:_____COURSE TITLE_____

(UNCLASSIFIED/CLASSIFIED, as applicable)

COURSE CONTENT

2. UNIT TITLE AS IT APPEARS ON TABLE I OF CC/TS TIME: 4.0 HRS

Example: **AFTO FORM 781 SYMBOLS AND DOCUMENTATION**

SUPPORT MATERIAL AND GUIDANCE

Student Instructional Material

Enter applicable information for the entire unit or none.

Audiovisual Aids
Enter applicable information for the entire unit or none.

Training Equipment
Enter applicable information for the entire unit or none.

Instructional Method
Enter applicable information.

PAGE___

COURSE NUMBER BLOCK UNIT DATE
(AS APPLICABLE)

Attachment 16

SAMPLE FORMAT FOR POI UNIT 2 -CONTINUED

POI Unit 2 Continued. This sample identifies the objective, teaching steps, and instructional guidance for the second unit of instruction as identified on the course chart/training standard.

(UNCLASSIFIED/CLASSIFIED, as applicable)

COURSE CONTENT (CONTINUED)

---

a. ENTER COURSE OBJECTIVE

Example: Using applicable TOs, identify symbols used in forms documentation, and their purpose with no instructor assistance.

CC/TS: 2a PROF: XX MEAS: X TIME: X.X HRS
(***Example:*** C) (***Example:*** O)

(1) ENTER TEACHING STEP AS APPLICABLE

Example: Discuss symbols used in forms documentation
(a) ENTER ANY TEACHING SUBSTEPS AS APPLICABLE
Example: RED X

(b) ENTER ANY TEACHING SUBSTEPS AS APPLICABLE
Example: RED /

(2) ENTER TEACHING STEP AS APPLICABLE

Example: Describe the purpose of each symbol

<u>INSTRUCTIONAL GUIDANCE</u>

(2a) Enter any guidance on how to teach the lesson. Do not reiterate teaching steps.

Attachment 17

SAMPLE FORMAT FOR POI UNIT 3

POI Unit 3. This sample identifies the objective, teaching steps, and instructional guidance for the third unit of instruction as identified on the course chart/training standard.

(UNCLASSIFIED/CLASSIFIED, as applicable)

COURSE CONTENT (CONTINUED)

ENTER COURSE OBJECTIVE
Example: Using the applicable TOs and an AFTO Form 244, document the form with no instructor assistance

CC/TS: 3 PROF: XX MEAS: X TIME: X.X HRS

(1) ENTER TEACHING STEP AS APPLICABLE
Example: Demonstrate documentation of the AFTO Form 244.

(2) ENTER TEACHING STEP AS APPLICABLE
Example: Allow students to document an AFTO Form 244.

INSTRUCTIONAL GUIDANCE
Enter any guidance on how to teach the lesson. Do not reiterate teaching steps.

Attachment 18

SAMPLE FORMAT FOR COURSE CRITIQUE AND GRADUATION PAGE

Course Critique and Graduation. This sample identifies the format for the course critique and graduation.

PLAN OF INSTRUCTION

NAME OF INSTRUCTOR: _____COURSE TITLE_____

(UNCLASSIFIED/CLASSIFIED, as applicable)

COURSE CONTENT

4. COURSE CRITIQUE AND GRADUATION **TIME: 0.5 HR**

SUPPORT MATERIAL AND GUIDANCE

Student Instructional Material
Student critique forms.
Audiovisual Aids
None.
Training Equipment
None
Instructional Method
Lecture/Discussion.
a. Administer the test (as applicable).
b. Conduct course critique.
INSTRUCTIONAL GUIDANCE
a. Brief students on test administration and test compromise. Explain the need for and importance of the Student Critique Program. Pass out student critique forms and provide instructions for completing the form. Inform students of the option of filling out the form as a group or individual (highly recommended). If possible have another instructor administer the critique.
b. Conduct graduation.
INSTRUCTIONAL GUIDANCE
Issue completed AF Form 1256, **Certificate of Training** (if applicable). Turn in a signed class roster to the maintenance training office to ensure students who have completed the course are updated in CAMS/GO81 through the corresponding course code.

PAGE____
COURSE NUMBER BLOCK UNIT DATE

Attachment 19

SAMPLE FORMAT FOR LESSON PLAN - PART 2, INTRODUCTION

Lesson Plan Format. This page identifies the lesson plan format (Introduction) when personalizing the instructor POI.

LESSSON PLAN INTRODUCTION

COURSE NUMBER

LESSON INTRODUCTION

ATTENTION: Use the attention step to alert the students that the trainer is ready to begin the lesson. Use it to gain the attention of the students.

OVERVIEW: An overview provides an explanation of what to expect during the lesson. It normally includes an explanation of the objectives and the major teaching steps. The overview provides a roadmap to help the student follow the lesson.

MOTIVATION: Use the motivation step to gain the students' interest in the training. This step may be combined with the attention step. The trainer should explain why it is important for the students to learn the information that is presented during the training session.

Transition: The transition step allows the trainer to move from the introduction to the body of the instruction. Use it to focus the students' attention on the first major teaching step.

Sample Lesson Plan - Introduction (Personalization)

PAGE

COURSE NUMBER BLOCK UNIT DATE

Attachment 20

SAMPLE FORMAT FOR LESSON PLAN - BODY

This page identifies the lesson plan format (body) when personalizing the instructor POI.

LESSON PLAN BODY

PRESENTATION/EXPLANATION:

Example:

Body. The body identifies the objective, teaching steps and substeps. For longer blocks/units of instruction use interim summaries as needed.

2a. Symbols

1. Refer to slide 1.
2. Explain that each symbol indicates varying degrees of severity of writeups.
3. Stress importance of using the correct symbol.

Transition: Use to tie up one thought and proceed into another.

Example: Now that we know what symbols are used in documentation, let's continue with some actual documentation. Any questions?

2b. Documentation

1. Use slide 2 and fill it in on the board while explaining procedures to students.
2. Ask questions while completing the form.

Question: What symbol is used to indicate a writeup that would ground an aircraft?

NOTE: Instructional guidance is not required but may be used if the instructor requires additional appropriate information.

Sample Lesson Plan - Body (Personalization)

Application/Performance: (None or as applicable)

Evaluation: (None or as applicable)

PAGE

COURSE NUMBER BLOCK UNIT DATE

Attachment 21

SAMPLE FORMAT FOR LESSON PLAN - CONCLUSION

Lesson Plan Format. This page identifies the lesson plan format (conclusion) when personalizing the instructor POI.

LESSON PLAN CONCLUSION

CONCLUSION: After the last teaching step of each objective, a summary of the information presented is performed. The conclusion contains a summary, remotivation, and closure.

SUMMARY: The summary is used to remind the students of the objective and the major teaching steps of the lesson. This step allows the students to review the information learned and clear up any misconceptions. The summary should reemphasize safety and the use of TOs, if applicable, and reiterate the importance of understanding material presented, and summarize key points. Any other items deemed appropriate by the instructor may be included. Do not introduce new material.

REMOTIVATION: The remotivation step allows the trainer to remind the students why it is important to remember what was taught and how the information applies to them.

CLOSURE: The closure statement lets the student know the lesson is over.

NOTE: Do not use the conclusion to introduce new information.

Sample Lesson Plan - Conclusion (Personalization)

PAGE

COURSE NUMBER BLOCK UNIT DATE

Attachment 22

SAMPLE FORMAT FOR VISUAL INFORMATION CERTIFICATION

Visual Information Certification. Use the visual information certification to certify each visual information-training program (videos).

1. Program Title: _____

2. Program Number: _____

3. Program Running: _____

4. The following subject matter expert has reviewed this visual information program:

(Please print clearly)
NAME: _____
JOB SERIES: _____
GRADE: _____
OFFICE SYMBOL: _____
DUTY PHONE: _____

5. I certify that this visual information program is technically correct and is in accordance with applicable Air Force, Air Education and Training Command, and technical publications.

DATE CERTIFIED: _____
SIGNATURE: _____

6. I certify that an 18-month review of this program was conducted and its content is still current and applicable to course objective(s).

Review Date	Next Review Date	Certifier Signature	Remarks
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTE: This worksheet may be in the form of an automated product.

Attachment 23

AETC FORM 18, TEST ANALYSIS WORKSHEET

A23.1. AETC Form 18. Use this form to analyze maintenance test conducted by the MTO.

TEST ANALYSIS WORKSHEET

	1	2	3	4	5	6	TEST AVERAGE
COURSE NUMBER	AC-T-1A-01	AC-T-1A-01	AC-T-1A-01	AC-T-1A-01	AC-T-1A-01		94.28
NUMBER OF STUDENTS	6	6	5	5	6		
NO./NAME OF INSTRUCTORS	D.BASS	R.LLOYD	D.SMITH	E.BERNING	J.AMOS		NO OF CASES
RECERTIFICATION	6 DEC 02	13 DEC02	20 DEC02	10JAN03	13JAN03		28

EVALUATION OF SPECIFIC ITEMS OF TEST																													EVALUATION OF ENTIRE TEST							
ITEM NO	ANSWERS SELECTED IN ERROR																												WRONG ITEMS						TOTAL	
	A						B					C						D					E						1	2	3	4	5	6	WG	RT
1	X			X				X				X																X	2	2			1		5	23
2																					X											1			1	27
3										X							X			X						X				1	1	1	1		4	24
4		X													X				X							X			1		1	1	1		4	24
5					X																			X					1				1		2	26
6								X																						1					1	27
7		X		X									X								X							X	2		1	1	1		5	23
8			X							X																			1	1					2	26
9																						X				X		X				1	2		3	25
10	X				X	X	X				X				X		X												3	2	2				7	21
11			X																										1						1	27
12	X									X			X	X							X								1	1	2	1			5	23
13																						X			X							1	1		2	26
14																X															1				1	27
15						X		X																					1	1					2	26
16																	X		X						X	X					1	1	2		4	24
17					X									X		X													1		2				3	25
18																						X		X								1	1		2	26
19									X						X					X								X		1	1	1	1		4	24
20		X										X					X		X		X				X				1	1	1	2	1		6	22
21																																				
22																																				
23																																				
24																																				
25																																				
26																																				

AETC FORM 18, 20021101 *(IMT-V2)*

A23.2. AETC Completion Instructions. Complete AETC Form 18 as follows:

A23.2.1. Enter the course number.

A23.2.2. Enter the number of students in the class tested.

A23.2.3. Enter the name of the instructor that taught the class.

A23.2.4. Enter date test data was completed.

A23.2.5. Draw a heavy line through or block out the correct answer for each question.

A23.2.6. As each group tests, document the answers selected in error in the appropriate block.

A23.2.7. Enter in the number of cases block—the total number of cases recorded in sections 1 through 6.

A23.2.8. Using the completed answer sheet, record the total answers selected in error in the appropriate A, B, C, D, or E column for each question.

A23.2.9. When the test is administered 6 times or 30 samplings, enter the total questions missed in the "Total Wrong" column.

A23.2.10. Enter the difference between the "Number of Cases" and the "Total Wrong" column in the Total Right" column.

A23.2.11. After completing instruction 10, look at or analyze those questions that have a 50 percent or more miss rate to determine whether or not the test is valid, or if the test questions need to be rewritten.

A23.2.12. Document all test analysis information on the reverse of AETC Form 18.