

AFSC 3D0X2

CYBER SYSTEMS OPERATIONS



**CAREER FIELD EDUCATION
AND TRAINING PLAN**

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CAREER FIELD EDUCATION AND TRAINING PLAN
CYBER SYSTEMS OPERATIONS
AFSC 3D0X2

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CYBER SYSTEMS OPERATIONS AFSC 3D0X2

CAREER FIELD EDUCATION AND TRAINING PLAN

PART I

Preface

1. The changing Command, Control, Communications, Computer, and Intelligence (C4I) and Air and Space Expeditionary Aerospace Forces (AEF) environments require vision, preparation, and attention to ensure people have the right skills and tools to deliver the C4I capabilities and the support required by the warfighter in meeting the Air Force mission of today and the vision of the future. Declining resources, expanding diversity of mission, and ever-changing technologies in the Air Force are impacting the availability of our most valuable resource-- people. These factors will continue to exist in the future, making it essential for the workforce to be effectively and efficiently trained to perform duties within each skill level of an Air Force Specialty (AFS). To meet the challenges of tomorrow, the Air Force must place a greater emphasis on career field training. This Cyber Systems Operations Career Field Education and Training Plan (CFETP) is a comprehensive core training document that identifies life-cycle training/education requirements, support resources, and minimum core task requirements for the 3D0X2 specialty. The plan is a "training road map" for the career field. It provides personnel a clear career path to success and makes career field training identifiable, measurable, and budget defensible.

2. **IMPORTANT:** This CFETP is not a stand-alone document. It must be used in conjunction with the 3DXXX Cyberspace Support (Common Core) CFETP, which outlines tasks and courses shared by other 3D specialties. Together, the 3DXXX and 3D0X2 CFETPs provide comprehensive career field guidance and training for members of the AFSC 3D0X2.

3. The CFETP documents the career field training program and consists of two parts. Management uses both parts in conjunction with Training Business Area (TBA) to plan, manage and control training within the career field. **NOTE:** Civilians occupying associated positions will use Part II to support duty position qualification training.

3.1. Part I provides information necessary for overall management of the specialty. Section A explains how everyone will use the plan; Section B identifies career field progression information, duties and responsibilities, training strategies and career field path; Section C associates each level with specialty qualifications (knowledge, education, experience, training and other); Section D indicates resource constraints (e.g., funds, manpower, equipment, facilities); and Section E identifies transition training guide requirements for SSgt through MSgt.

3.2. Part II includes the following: Section A identifies the Specialty Training Standard (STS) and includes duties, tasks, Training References (TRs) to support training, AETC-conducted training, wartime course and core task and correspondence course requirements. Section B contains the Course Objectives List (COL) and training standards supervisors will use to determine if Airmen satisfied training requirements. Section C identifies available support materials (e.g., Qualification Training Packages (QTPs), which may be developed to support proficiency training). Section D identifies a training course index supervisors can use to determine resources available to support training, included here are both mandatory and optional courses. Section E identifies MAJCOM-unique training requirements supervisors can use to

determine additional training required for the associated qualification needs. At unit level, supervisors and trainers will use Part II to identify, plan and conduct training commensurate with the overall goals of this plan.

4. Use of the guidance provided in this CFETP provides the foundation for effective and efficient training for individuals in this career field at the appropriate points in their careers. This plan enables the Air Force to train today's work force for tomorrow's jobs.

Abbreviations/Terms Explained

This section provides a common understanding of the terms that apply to the Cyber Systems Operations Career Field and Education Training Plan.

Advanced Training (AT). A formal course of training that leads to a technical or supervisory level of an AFS. Training is for selected Airmen at the advanced level of an AFS.

Air and Space Expeditionary Force (AEF). The AEF is the Air Force's methodology for organizing, training, equipping, and sustaining rapidly responsive air and space forces to meet defense strategy requirements. Through the AEF, consisting of enabler and tempo banded capabilities, the Air Force supports defense strategy requirements using a combination of both permanently assigned and rotational (allocated) forces.

Air and Space Expeditionary Task Force (AETF). The AETF is the Air Force's primary warfighting organization and the means by which we present forces to a Joint Forces Commander (JFC). When established, AETFs will form up under the designated Air Force component headquarters.

Air Education Training Command (AETC). Responsible for the recruiting, training and education of Air Force personnel. AETC also provides pre-commissioning, professional military and continuing education.

Air Force Career Field Manager (AFCFM). Representative appointed by the respective HQ USAF Deputy Chief of Staff or Under Secretariat to ensure that assigned Air Force specialties are trained and utilized to support Air Force mission requirements.

Air Force Enlisted Classification Directory (AFECD). The official directory for all military enlisted classification descriptions, codes, and identifiers. Establishes the occupational structure of the Air Force enlisted force. The occupational structure is flexible to permit enlisted personnel to specialize and develop their skills and abilities while allowing the Air Force to meet changing mission requirements. Individual enlisted personnel have a joint responsibility with commanders and supervisors at all levels to develop their abilities fully consistent with Air Force needs and within the established patterns of specialization.

Air Force Job Qualification Standard (AFJQS). A comprehensive task list that describes a particular job type or duty position. Supervisors use the AFJQS to document task qualification. The tasks on AFJQSs are common to all persons serving in the described duty position.

Air Force Qualification Training Package (AFQTP). An instructional course designed for use at the unit to qualify or aid qualification in a duty position, program, or on a piece of equipment. It may be printed, computer-based, or other audiovisual media.

Air Force Specialty (AFS). A group of positions (with the same title and code) that require common qualifications.

Air Force Tactics, Techniques and Procedures (AFTTP). The actions and methods that implement joint doctrine that describe how forces will be employed in joint operations. They are promulgated by the Chairman of the Joint Chief of Staff in coordination with the Combatants Commands, Services and the JCS.

Air University Associate-to-Baccalaureate Cooperative (AU ABC). Allows Airmen to turn a Community College of the Air Force Associates Degree into a Bachelor's Degree from an accredited university. The ABC program has established a partnership with various civilian higher-education institutions to offer four-year degree opportunities via distance learning. The participating schools will accept all of the credits earned by Airmen who have attained a CCAF degree and apply them to a Bachelor's degree related to their Air Force specialty.

Air University/AFCDA (Air Force Career Development Academy). The result of a reorganization of Air Force Institute for Advanced Distributed Learning (AFIADL); provides access to the Extension Course Institute.

Career Field Education and Training Plan (CFETP). A CFETP is a comprehensive core training document that identifies: life-cycle education and training requirements; training support resources; and minimum core task requirements for a specialty. The CFETP aims to give personnel a clear path and instill a sense of industry in career field training. CFETPs are officially posted at <http://www.e-publishing.af.mil/>.

Certification. A formal indication of an individual's ability to perform a task to required standards.

Certifying Official. A person assigned by the commander to determine an individual's ability to perform a task to required standards.

Chief Enlisted Manager (CEM) Code. CEM codes identify all chief master sergeant positions in the Enlisted Classification Structure. They also identify chief master sergeants who, through extensive experience and training, have demonstrated managerial ability to plan, direct, coordinate, implement, and control a wide range of work activity. Some managerial duties and responsibilities that are common to all chief enlisted managers are: managing and directing personnel resource activities; interpreting and enforcing policy and applicable directives; establishing control procedures to meet work goals and standards; recommending or initiating actions to improve functional operation efficiency; planning and programming work commitments and schedules; developing plans regarding facilities, supplies, and equipment procurement and maintenance.

Cloud Computing. Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Collaboration. Collaboration is the interaction among two or more individuals encompassing a variety of behaviors, including communication, information sharing, coordination, cooperation, problem-solving and negotiation.

Collaborative Tools. Collaborative tools consist of various web-based technologies including advanced white boarding, groupware, and facilitation. Collaborative capabilities assist significantly with managing information throughout its life cycle and enable Air Force members to perform most office-oriented and operational communication tasks from their desktops.

Computer Based Training (CBT). A forum for training in which the student learns via a computer terminal. It is an especially effective training tool that allows the students to practice applications while they learn.

Continuation Training. Additional advanced training that exceeds the minimum upgrade training requirements and emphasizes present or future duty assignments.

Core Task. A task AFSCs identify as a minimum qualification requirement for everyone within an AFSC, regardless of duty position. Core task may be specified for a particular skill level or in general across the AFSC. Guidance for using core task can be found in the applicable CFETP narrative.

Course Objective List (COL). A publication derived from initial/advanced skills Course Training Standard (CTS), identifying the tasks and knowledge requirements and respective standards provided to achieve a 3-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, *Air Force Training Program*.

Critical Tasks. Critical Tasks are tasks that require specific training and certification above and beyond other tasks. Tasks may be defined as critical either through AFI, Technical Orders, higher headquarters, or at any level in the unit.

Cross Utilization Training. Training on non-duty AFSC specific tasks.

Cyberspace. A global domain within the information environment consisting of the interdependent network of information technology infrastructures, including the Internet, telecommunications networks, computer systems, and embedded processors and controllers.

Cyberspace Operations. The employment of cyber capabilities where the primary purpose is to achieve objectives in or through cyberspace. Such operations include computer network operations and activities to operate and defend the DoD Information Network (DoDIN).

Direct Reporting Unit (DRU). Air Force subdivisions directly subordinate to the CSAF. A DRU performs a mission that does not fit into any of the MAJCOMs. A DRU has many of the same administrative and organizational responsibilities as a MAJCOM. An example of a DRU: USAF Academy.

DoD Directive 8570.01 (Information Assurance Training, Certification, and Workforce Management). Provides guidance and procedures for the training, certification, and management of the DoD workforce conducting Information Assurance (IA) functions in assigned duty positions.

DoD Information Network (DoDIN). The globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating and managing information on demand to warfighters, policy makers, and support personnel. The DoDIN includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve Information Superiority. The DoDIN supports all Department of Defense, National Security, and related Intelligence community missions and functions (strategic, operational, tactical, and business), in war and in peace. The DoDIN provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). The DoDIN provides interfaces to coalition, allied, and non-DOD users and systems.

Duty Position Tasks. The tasks assigned to an individual for the position currently held. These include, as a minimum, all core tasks that correspond to the duty position as directed by the AFCFM or MFM, and tasks assigned by the supervisor.

Education and Training Course Announcement (ETCA). Located at <https://etca.randolph.af.mil>, the ETCA contains specific MAJCOM procedures, fund cite instructions, reporting instructions, and listings for those formal courses the MAJCOMs or FOAs conduct or manage. The ETCA contains courses the Air Force and reserve forces conduct or administer and serves as a reference for the Air Force, DoD, other military services, government agencies, and security assistance programs.

Enlisted Specialty Training (EST). A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade Airmen in each skill level of a specialty.

Enterprise. The entire range of communications/networking within garrison and tactical realms to include voice, video, data, imagery and sensor.

Expeditionary Aerospace Force (EAF). The EAF concept is how the Air Force will organize, train, equip, and sustain itself by creating a mindset and cultural state that embraces the unique characteristics of aerospace power - range, speed, flexibility, precision - to meet national security challenges.

Exportable Training. Additional training via computer assisted, paper text, interactive video, or other necessary means to supplement training.

Field Operating Agency (FOA). FOAs are subdivisions of the Air Force directly subordinate to a headquarters US Air Force functional manager. An FOA performs field activities beyond the scope of any of the MAJCOMs. The activities are specialized or associated with an Air Force-wide mission. An example of a FOA: Air Force Lifecycle Management Center.

Field Training. Technical, operator, and other training that either a field training detachment or field training team conducts at operational locations on specific systems and associated direct-support equipment for maintenance and aircrew personnel.

Functional Area Manager (FAM). The FAM is the principal advisor to their respective commander/functional director/DCS on the management and oversight of all personnel and equipment within a specific functional area to support operational planning and execution. Commanders, managers, and supervisors at all levels must ensure the right people are selected to be FAMs based upon knowledge and experience. In order for FAMs to be efficient and effective as well as enable them to respond to time-sensitive planning requirements, commanders, managers, and supervisors must ensure that once selected, FAMs are provided the tools, time, and training required to do their job.

Individual Training Plan (ITP). Use Training Business Area (TBA) to document training. TBA reflects past and current qualifications, and is used to determine training requirements. It is intended to be a complete history of past training and current qualifications. Supervisors will ensure all documentation is accurate and comprehensive.

Information Resources Management (IRM). The process of managing information resources to accomplish agency missions and to improve agency performance (e.g., the reduction of information collection burdens on the public). (AFPD 33-1, *Information Resources Management*).

Information Systems (IS). Set of information resources organized for the collection, storage, processing, maintenance, use, sharing, dissemination, disposition, display, or transmission of information. (DoD 8500.2)

Initial Skills Training (IST). A formal school course that results in an AFSC 3-skill level award for enlisted or mandatory upgrade training to qualified officers. (AFI 36-2201, *Air Force Training Program*)

Instructional System Development (ISD). A deliberate and orderly (but flexible) process for planning, developing, implementing, and managing instructional systems. It ensures personnel are taught in a cost efficient way to become educated on the knowledge, skills, and abilities essential for successful job performance.

Joint Information Environment (JIE). A secure information environment comprised of shared information technology infrastructure, enterprise services, and a single security architecture, operated and managed per Unified Command Plan using enforceable standards, specifications, and common tactics, techniques, procedures.

Knowledge. Information from multiple domains that has been synthesized, through inference or deduction, into meaning or understanding that was not previously known. This includes: explicit knowledge, which can be easily articulated, codified, and stored; and tacit knowledge, which is based on personal experience, expertise, and judgment. Tacit knowledge is more challenging to capture and share than explicit knowledge.

Knowledge Training. Training used to provide a base of knowledge for task performance. It may also be used in lieu of task performance when the training capability does not exist. Learning gained through knowledge rather than hands-on experience. (AFI 36-2201, *Air Force Training Program*)

Major Command (MAJCOM). A MAJCOM represents a major Air Force subdivision having a specific portion of the Air Force mission. Each MAJCOM is directly subordinate to HQ USAF. MAJCOMs are interrelated and complementary, providing offensive, defensive, and support elements.

Master Task Listing (MTL). A comprehensive list (100%) of all tasks performed within a work center and consisting of the current CFETP or AFJQS and locally developed AF Forms 797 (as a minimum). Should include tasks required for deployment and/or UTC requirements.

Master Training Plan (MTP). Employs a strategy for ensuring the completion of all work center job requirements by using a MTL and provides milestones for task, Career Development Course (CDC) completion, and prioritizes deployment/UTC, home station training tasks, upgrade, and qualification tasks.

On-the-Job Training (OJT). Hands-on, over-the-shoulder training conducted to certify personnel in both upgrade (skill level award) and job qualification (duty position) training.

Proficiency Training. Additional training, either in-residence or exportable advanced training courses, or on-the-job training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

Qualification Training. Hands-on, task performance based training designed to qualify Airmen in a specific duty position. This training program occurs both during and after the upgrade training process and is designed to provide skills training required to do the job.

Resource Constraints. Resource deficiencies (such as money, facilities, time, manpower, and equipment) that preclude desired training from being delivered.

Service Oriented Architecture (SOA). A services oriented architecture (SOA) environment makes it easier and faster to build and deploy information capabilities that directly serve the needs of the Air Force. SOA is an information technology environment where the following occur: Mission and business processes are supported by information assets. Information assets are delivered to consumers through content delivery services. Content delivery services and other services interact to support process threads or to deliver information assets. Core services, such as infrastructure and presentation services, are independent of the content delivery services. Net-centric protocols and services allow federating and re-using both content delivery and core services for multiple users, domains, and information sources.

Specialty Training Requirements Team (STRT). A meeting chaired by the AFCFM with MAJCOM FMs, AETC Training Managers, Subject Matter Experts (SME) and HQ AETC Occupational Analysis Division (OAD) in attendance. Typically held three months prior to a Utilization and Training Workshop (U&TW) to finalize any CFETP changes or enlisted classification directory descriptions.

Specialty Training Standard (STS). An Air Force publication that describes an Air Force specialty in terms of tasks and knowledge that an Airman in that specialty may be expected to perform or to know on the job. Also identifies the training provided to achieve a 3-, 5-, 7-, or 9-skill level within an enlisted AFS. It further serves as a contract between AETC and the functional user to show which of the overall training requirements for an Air Force Specialty Code (AFSC) are taught in formal schools and correspondence courses.

Standard. An exact value, a physical entity, or an abstract concept established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results. It is a fixed quantity or quality.

System Training Plan (STP). A living document that explains what training is needed for a system and how to obtain the training.

Task Module (TM). A group of tasks performed together within an AFS that require common knowledge, skills, and abilities. TMs are identified by an identification code and a statement.

Total Force. All collective components (active, reserve, guard, and civilian elements) of the United States Air Force.

Training Advisory Group (TAG). Chaired by the AFCFM and attended by the MAJCOM, selected DRU and FOA functional managers. The TAG sets training goals and priorities, reviews training programs and evaluates emerging training technologies. The group meets, as required, to prioritize training product development.

Training Business Area (TBA). A web-based training application that provides Air Force warfighters with global, real-time visibility into qualifications, certifications and training status of communications professionals. TBA supports base, wing and work center training management activities by automating business processes and capabilities to eliminate paper-based practices.

Training Capability. The ability of a unit or base to provide training. Authorities consider the availability of equipment, qualified trainers, and study reference materials, and so on in determining a unit's training capability.

Training Planning Team (TPT). Comprised of the same personnel as a U&TW, TPTs are more intimately involved in training development and the range of issues examined is greater than in the U&TW forum.

Training Requirements Analysis (TRA). A detailed analysis of tasks for a particular AFSC to be included in the training decision process.

Training Setting. The type of forum in which training is provided through a formal resident school, on-the-job, field training, mobile training team, self-study, etc.

Trusted Thin Client (TTC). A computer or a computer program which depends on another computer (or server) to fulfill its traditional computational roles while utilizing security policy to prevent cross domain contamination.

Unit Type Code (UTC). A five-character alphanumeric code identifying a specific force package of personnel and/or equipment. The UTC is the means for linking logistics and manpower details within a unit type and is used to communicate force data. The UTC represents a wartime capability designed to fill a valid contingency requirement.

Upgrade Training. Training that leads to the award of a higher skill level.

Utilization and Training Workshop (U&TW). A forum of the AFCFM, MAJCOM Functional Managers, subject matter experts (SME), and AETC training personnel that determines career ladder training requirements.

Wartime Tasks. Those tasks that must be taught when courses are accelerated in a wartime environment. In response to a wartime scenario, these tasks will be taught in the 3-level course in a streamlined training environment. These tasks are only for those career fields that still need them applied to their schoolhouse tasks.

Section A - General Information

1. Purpose of the CFETP. This CFETP, when used in conjunction with the 3DXXX Cyberspace Support CFETP, provides the information necessary for AFCFMs, MAJCOM Functional Managers (MFM), commanders, training managers, supervisors and trainers to plan, develop, manage and conduct an effective and efficient career field training program. The plan outlines the initial skills, upgrade, qualification, advanced and proficiency training those individuals in AFSC 3D0X2 should receive in order to develop and progress throughout their careers. Initial skills training is the AFS specific training an individual receives upon entry into the AF or upon retraining into this specialty for award of the 3-skill level. This training is provided by the 336th Training Squadron (TRS) at Keesler AFB, MS. Upgrade training identifies the mandatory courses, task qualification requirements, Career Development Course (CDC) completion and correspondence courses required for award of the 5-, 7-, or 9-skill level. Qualification training is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills and knowledge required to do the job. Advanced training is formal specialty training used for selected airmen. Proficiency training is additional training, either in-residence or exportable advanced training courses, or on-the-job training provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade. The CFETP has several purposes, some of which are:

- 1.1.** Serves as a management tool to plan, develop, manage, and conduct a career field training program. Also, ensures that established training is provided at the appropriate point in an individual's career.
- 1.2.** Identifies task and knowledge training requirements for each skill level in the specialty and recommends training throughout each phase of an individual's career.
- 1.3.** Lists training courses available in the specialty, identifies sources of the training, and provides the training medium.
- 1.4.** Identifies major resource constraints that impact implementation of the desired career field training program.

2. Use of the CFETP. The CFETP is maintained by the 3D0XX Air Force Career Field Manager (AFCFM), SAF/CIO A6SF. MAJCOM FMs and AETC review the plan annually to ensure currency and accuracy and forward recommended changes to the AFCFM. Using the list of courses in Part II, they determine whether duplicate training exists and take steps to eliminate/prevent duplicate efforts. Career field training managers at all levels use the plan to ensure a comprehensive and cohesive training program is available for each individual in the career ladder.

- 2.1.** AETC training personnel develop/revise formal resident and exportable training based upon requirements established by the users and documented in the STS. They also develop procurement and acquisition strategies for obtaining resources needed to provide the identified training.
- 2.2.** MAJCOM FMs ensure their training programs complement the CFETP mandatory initial skill and upgrade requirements. They also identify the needed AFJQs/AFQTPs to document unique upgrade and continuation training requirements. Requirements are satisfied through OJT,

resident training, contract training, or exportable courseware/courses. MAJCOM developed training to support this AFSC must be included into this plan.

2.3. 81 TRSS/TSQ Qualification Training Flight (Q-Flight) personnel develop training packages (AFJQSs/AFQTPs) based on requests submitted by the MAJCOMs and according to the priorities assigned by the AFCFM.

2.4. Unit level training managers and supervisors manage and control progression through the career field by ensuring individuals complete the mandatory training requirements for upgrade specified in this plan and supplemented by their MAJCOM. The list of courses in Part II is used as a reference for planning continuation or career enhancement training.

2.5. Submit recommended CFETP corrections to the 81 TRSS Q-Flight Customer Service Desk at 81 TRSS/TSQS, 601 D Street, Keesler AFB MS 39534-2235 or call DSN 597-3343. To contact electronically send email to: qflight.customer.service@us.af.mil.

2.6. Submit recommended CFETP additions/deletions through your MAJCOM Functional Manager.

3. Coordination and Approval of the CFETP. The AFCFM is the approval authority. MAJCOM representatives and AETC training personnel coordinate on the career field training requirements. The AETC training manager initiates an annual review of this document by AETC and MAJCOM functional managers to ensure the CFETP's currency and accuracy by using the list of courses in Part II to eliminate duplicate training.

Section B - Career Field Progression and Information

4. Specialty Description. This information reflects what is presented in the AFECD.

4.1. Cyber Systems Operations Apprentice/Journeyman/Craftsman (3D0X2) Specialty Summary. Installs, supports and maintains server operating systems or other computer systems and the software applications pertinent to its operation, while also ensuring current defensive mechanisms are in place (IAVA Patches, etc.), and responding to service outages and interruptions to network operations. Administers server-based networked systems, distributed applications, network storage, messaging, and application monitoring required to provision, sustain, operate and integrate cyber networked systems and applications in garrison and at deployed locations. Core competencies include: server operating systems, database administration, web technologies, systems-related project management and supervising computer operators. Supports identification, reconnaissance and remediation of vulnerabilities while enhancing capabilities within cyber environments to achieve desired affects. **Related DoD Occupational Subgroup: 153100.**

4.2. Duties and Responsibilities:

4.2.1. Provides networked application resources by designing, configuring, installing, and managing data services, operating systems and server-based applications. Provides directory services utilizing dynamically-assigned IP addresses, Domain Name Server, network storage devices, and electronic messaging resources. Manages secure authentication methods utilizing public key infrastructure (PKI) technologies and procedures. Standardizes user privileges and system settings using automated deployment tools such as Group Policy Management Console (GPMC) and System Management Server. Implements server and special mission system security fixes, operating system patches, and antivirus software. Develops, tests, and implements local restoral and contingency operations plans. Processes and reviews C4 systems requirement documentation, telecommunication service requests, status of acquisition messages, and telecommunication service orders. Performs strategic and budget planning for networks.

4.2.2. Performs system resource management, manages system accounts, performs system-wide backups and data recovery, and load and capacity planning and management. Ensures continuing systems operability by providing ongoing optimization and problem solving support. Applies computer security policies to safeguard systems and information. Categorizes, isolates, and resolves system problems. Performs fault isolation by validating, isolating, correcting faults, and verifying service restoral with customers. Processes, documents and coordinates resolution of trouble calls from lower support echelons. Processes scheduled and authorized outages. Submits outage reports in response to unscheduled outages.

4.2.3. Utilizes enterprise patching tools to implement security updates and patches to include: Information Assurance Vulnerability Assessments (IAVA), C4 Notice to Airman (C4 NOTAM), Time Compliance Network Orders (TCNO), Time Compliance Technical Order (TCTO), operating system patches, and antivirus software. Implements and enforces national, DoD, and Air Force security policies and directives. Performs proactive security functions to deter, detect, isolate, contain, and recover from information system and network security intrusions. Performs system sanitation resulting from Classified Message Incidents (CMIs) and Classified File Incidents (CFIs).

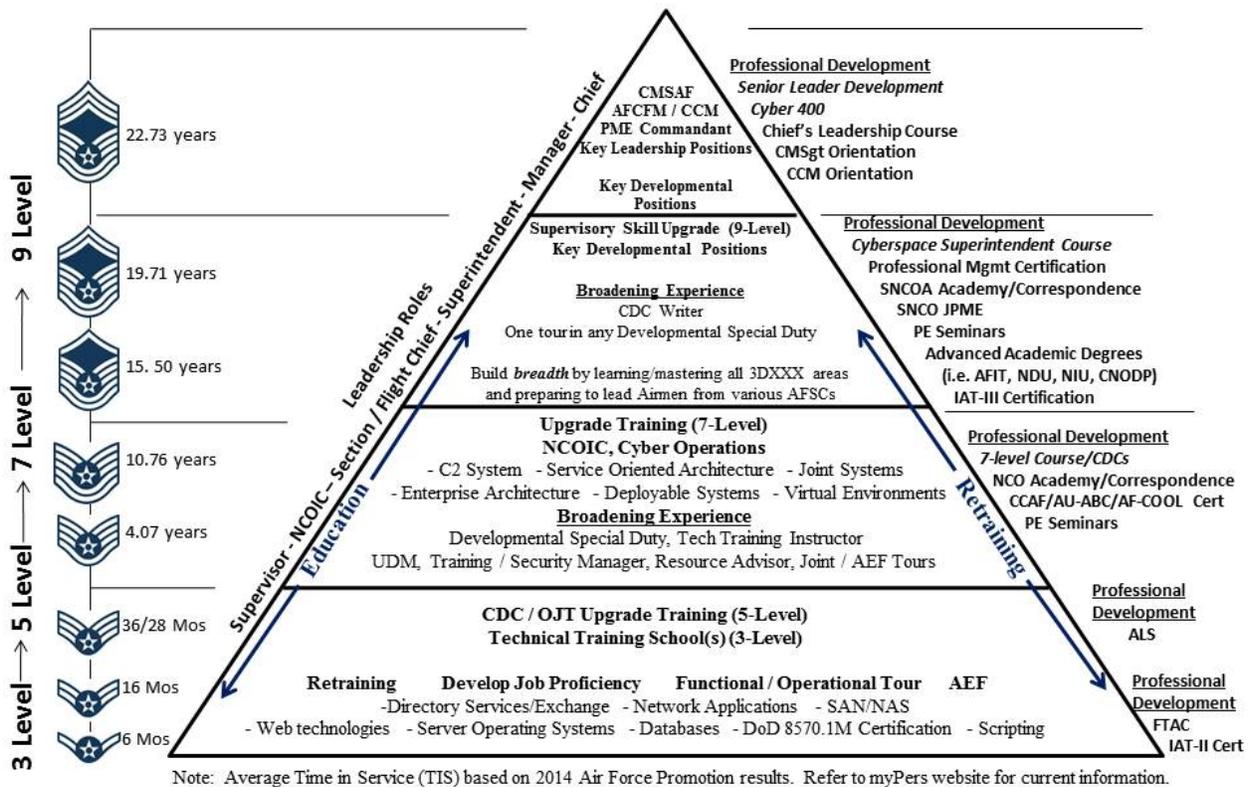
4.2.4. Performs and supports information warfare operations support within strictly controlled parameters and provides real-time intrusion detection and firewall protection for all IT resources. Researches latest system threats to develop and test tactics, techniques and procedures (TTPs) for defensive information operations. Employs developed TTPs on Air Force and DoD computer networks to defend against hostile information operations. Analyzes risks and/or vulnerabilities and takes corrective action to mitigate or remove them.

4.2.5. Reviews and implements C4 systems requirements. Performs strategic and budget planning for systems hardware and software. Coordinates and implements system service level agreements and memorandum of understanding with user agencies.

4.2.6. Manages, supervises, and performs planning and implementation activities. Manages implementation and project installation and ensures architecture, configuration, and integration conformity. Develops, plans, and integrates base communications systems. Serves as advisor at meetings for facility design, military construction programs and minor construction planning. Evaluates base comprehensive plan and civil engineering projects. Monitors status of base civil engineer work requests. Performs mission review with customers. Controls, manages, and monitors project milestones and funding from inception to completion. Determines adequacy and correctness of project packages and amendments. Monitors project status and completion actions. Manages and maintains system installation records, files, and indexes. Evaluates contracts, wartime, support, contingency and exercise plans to determine impact on manpower, equipment, and systems.

5. Skills and Career Progression. Adequate training is essential to timely progression of personnel from apprentice to superintendent skill levels and plays an important role in the Air Force’s ability to accomplish its mission. Everyone involved in training must do their part to plan, manage, and conduct effective training programs. The guidance provided in this part of the CFETP and the 3D0X2, Cyber Systems Operations Career Path table will ensure individuals receive viable training at appropriate points in their career. The training listed in this plan is specific to the AFSC 3D0X2 and must be used in conjunction with the common core training identified in the 3DXXX CFETP. Mandatory requirements for upgrade training to each skill level are covered in [Section C](#).

3D0X2 Career Path Chart



6. Training Decisions. This CFETP was developed to encapsulate an entire spectrum of training requirements for the Cyber Systems Operations career field, using a building block approach (simple to complex). Included in this spectrum is the strategy of when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training.

6.1. Proficiency Training. This training is job qualification for an assigned duty position. Additional qualification training becomes necessary when personnel transfer to another duty position, the unit mission changes, a new personnel program comes on board, or any time changes in techniques or procedures occur.

6.1.1. Dashed tasks are available in TBA for individual training plans (ITP) in the event an Airman performs the tasks.

6.1.2. The 81 TRSS/TSQ (Q-Flight) develops AFJQSs/AFQTPs to support tasks relating to Cyber Operations and Systems, functions, and duties. Completion of AFJQSs/AFQTPs is mandatory by duty position for personnel in upgrade or qualification training.

6.2. Seven-Level Upgrade Training Requirements: Completion of the E6ACW3DX7X 01AA Cyberspace Career Advancement Course is mandatory.

6.3. Nine-Level training requirements. Completion of E6ACW3DX9X 00AA Cyberspace Superintendent Course is mandatory.

7. Community College of the Air Force (CCAF) Academic Programs. Enrollment in CCAF occurs upon completion of basic military training. CCAF provides the opportunity for all enlisted members to obtain an Associate in Applied Science degree. In order to be awarded the degree must be completed before the student separates from the Air Force, retires, or is commissioned as an officer. In addition to its associate's degree program, CCAF offers the following:

7.1. CCAF Instructor Certification. The College offers the CCAF Instructor Certification to instructors teaching full time in a CCAF affiliated school. To qualify, instructors must complete a 3 semester hour Instructor Methodology course, a 12 semester hour Teaching Internship, have one year teaching experience from date of Teaching Internship completion, hold an associate or higher degree, complete at least 1,000 hours of documented practical experience teaching a CCAF course(s), and be recommended by their commander/commandant.

7.2. The Information System Technology (0IYY) program applies to the 3D0X2 career field.

7.2.1. Degree Requirements: Individuals must hold the 5-skill level at the time of program completion.

	Semester hours
Technical Education.....	24
Leadership, Management, and Military Studies	6
Physical Education.....	4
General Education.....	15
Program Electives	15
Total	64

7.2.2. Technical Education (24 semester hours): A minimum of 12 semester hours of technical core subjects and courses must be applied and the remaining semester hours will be applied from technical core/technical elective subjects and courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject/course must be approved in advance by the technical branch of the CCAF Administrative Center.

7.2.3. Leadership, Management, and Military Studies (LMMS)(6 semester hours): Professional military education (PME) and/or civilian management courses accepted in transfer and/or by testing credit. See CCAF General Catalog for application of civilian management courses.

7.2.4. Physical Education (4 semester hours): Satisfied upon completion of basic military training.

7.2.5. General Education (15 semester hours): Courses must meet the criteria for application of courses to the General Education requirement and be in agreement with the definitions of applicable General Education subjects/courses as outlined in the CCAF General Catalog.

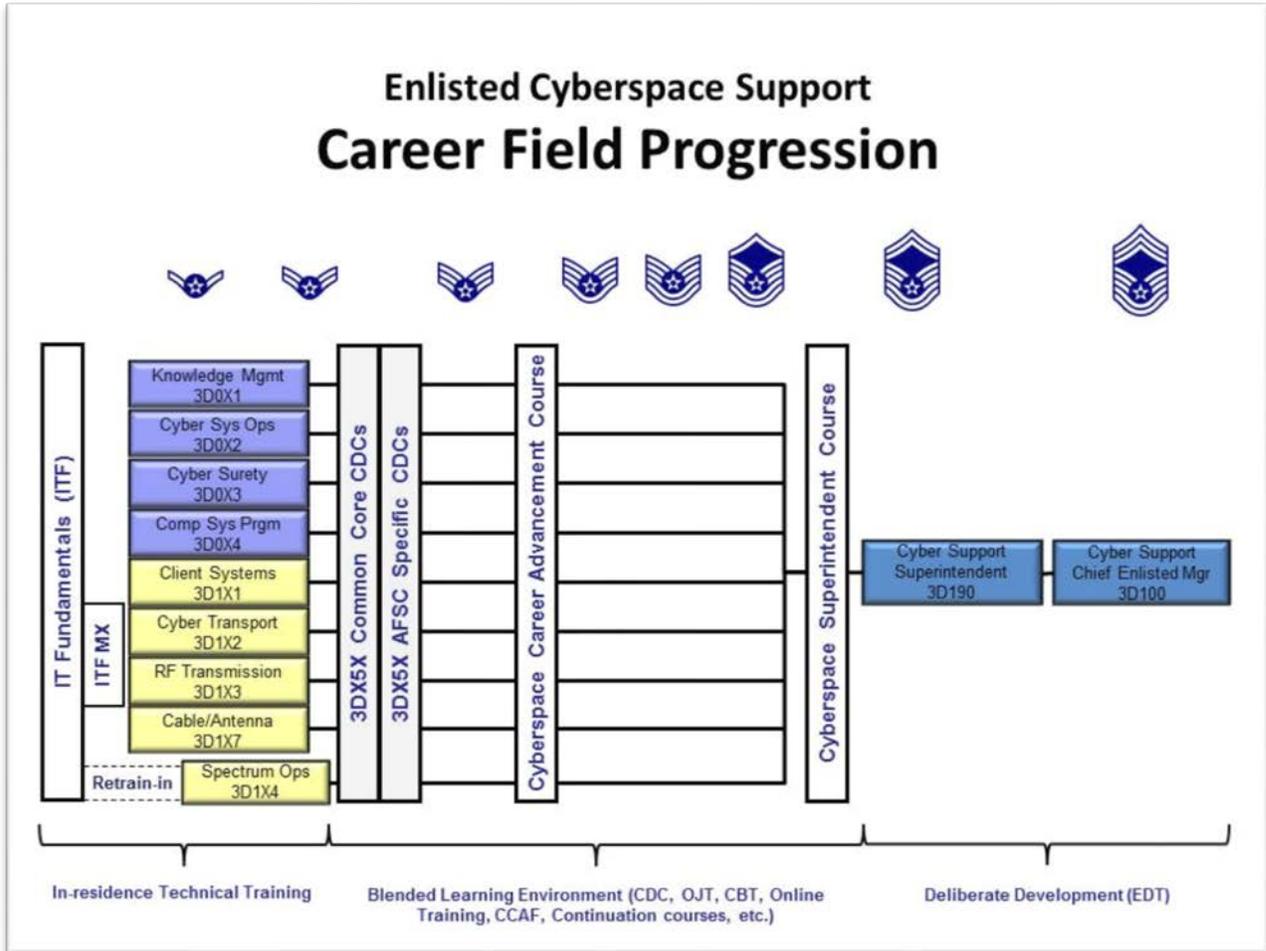
7.2.6. General Education Mobile (GEM): GEM is a partnership between CCAF and civilian academic institutions to offer general education courses to meet CCAF A.A.S. degree requirements. Courses are offered via distance learning which reduces CCAF educational impact of deployments, PCS and family commitments.

7.2.7. Program Elective (15 semester hours): Courses applying to technical education, LMMS or general education requirements; natural science courses meeting general education requirement application criteria; foreign language credit earned at Defense Language Institute or through the Defense Language Proficiency Test; maximum 9 Semester Hours of CCAF degree-applicable technical course credit otherwise not applicable to program of enrollment.

7.3. See the current CCAF General Catalog for details regarding the Associates of Applied Science in Computer Science Technology. The catalog is available at your education office or from <http://www.au.af.mil/au/barnes/ccaf/>.

7.4. Additional off-duty education is highly encourage, but is a personal choice that is encouraged for all. Individuals desiring to become an AETC instructor should be actively pursuing an associate degree. A degreed faculty is necessary to maintain CCAF's accreditation through the Southern Association of Colleges and Schools.

8. Career Field Path. The following summarizes career progression and personnel allocations across the career ladder. 3DXXX personnel maintain their individual AFSC identifiers through the rank of MSgt. Upon promotion to SMSgt, all 3DXXX AFSCs merge to become a 3D190. 3D190's compete for the rank of Chief to become a 3D100.



3D0X2 CYBER SYSTEMS OPERATIONS CAREER PATH

	GRADE REQUIREMENTS			
<i>Education and Training Requirements</i>	<i>Rank</i>	<i>Average Sew-On</i>	<i>Earliest Sew-On</i>	<i>High Year Of Tenure (HYT)</i>
Basic Military Training School (BMTS)				
Apprentice Technical School (3-Skill Level)	Amn	6 months		
Upgrade To Journeyman (5-Skill Level) MANDATORY - Minimum 12 months on-the-job training (OJT). - Minimum 9 months OJT for retrainees. - Complete appropriate CDC. - Specific AFJQSS/AFQTPs for equipment at assigned location by duty position. - Completion of 5-Level Training Track CBTs, if available. - Complete 3DXXX CFETP requirements for 5-Skill Level upgrade. OPTIONAL AETC Supplemental training courses as determined by MAJCOM.	A1C SrA	16 months 3 years	28 months	8 Years
Airman Leadership School (ALS) - Minimum of 3 years TIS; no more than 6 years TIS	Trainer - Qualified and certified to perform the task to be trained. - Must attend formal AF Training Course. - Recommended by the supervisor.			
Upgrade To Craftsman (7-Skill Level) MANDATORY - Minimum rank of SSgt.	SSgt TSgt	4.07 years 10.76 years	3 years 5 years	15 Years 20 years

3D0X2 CYBER SYSTEMS OPERATIONS CAREER PATH

	GRADE REQUIREMENTS			
<i>Education and Training Requirements</i>	<i>Rank</i>	<i>Average Sew-On</i>	<i>Earliest Sew-On</i>	<i>High Year Of Tenure (HYT)</i>
<ul style="list-style-type: none"> - 12 months OJT. - 6 months OJT for retrainees. - Completion of the E6ACW3DX7X 01AA Cyberspace Career Advancement Course. - Specific AFJQs/AFQTPs for equipment at assigned location by duty position. - Completion of 7-Level Training Track CBTs, if available. - Complete 3DXXX CFETP requirements for 7-Skill Level upgrade. <p>OPTIONAL</p> <ul style="list-style-type: none"> -AETC Supplemental training courses as determined by MAJCOM. 	MSgt	15.50 years	8 years	24 years
<p>Noncommissioned Officer Academy (NCOA) Basic Phase 2 Distance Learning Course</p> <ul style="list-style-type: none"> - Must have 7 years TIS. 	<p>Certifier</p> <ul style="list-style-type: none"> -Must be a SSgt with a 5-skill level or civilian equivalent. - Must attend formal AF Training Course. -Be a person other than the trainer except for AFSCs, duty positions, units, and/or work centers with specialized training standardization and certification requirements. 			
<p>USAF Senior NCO Academy (SNCOA) Basic Phase 3 Distance Learning Course</p> <ul style="list-style-type: none"> - Must have 12 years TIS. 				

3D0X2 CYBER SYSTEMS OPERATIONS CAREER PATH

	GRADE REQUIREMENTS			
<i>Education and Training Requirements</i>	<i>Rank</i>	<i>Average Sew-On</i>	<i>Earliest Sew-On</i>	<i>High Year Of Tenure (HYT)</i>
Upgrade To Superintendent (9-Skill Level) MANDATORY - Minimum rank of SMSgt. - Completion of 9-Level Training Track CBTs, if available. - Specific AFJQSs/AFQTPs for equipment at assigned location by duty position. - Complete 3DXXX CFETP requirements for 9-Skill Level.	SMSgt	19.71 years	11 years	26 years
Chief Enlisted Manager (CEM)	CMSgt	22.73 years	14 years	30 years

NOTE 1: Published sew-on times are Air Force averages for the 3D0X2 AFSC. Refer to the Air Force Personnel Center’s myPers website for more career field specific information.

NOTE 2: See Part II, Sections C and D for a list of AFJQSs/AFQTPs and AETC supplemental training.

NOTE 3: All core position tasks must be completed prior to upgrade.

Section C - Skill Level Training Requirements

9. Purpose. The various skill levels in the career field are defined in terms of tasks and knowledge requirements for each skill level in the Cyber Systems Operations field of the Cyberspace Support career ladder. They are stated in broad, general terms and establish the standards of performance. Core tasks, knowledge items, and skill requirements for this specialty are identified in the STS, COL, CDCs, AFJQs/AFQTPs, etc. Completion of the mandatory 3-level skill awarding course, CDCs, and applicable AFJQs/AFQTPs define the Air Force core tasks for this specialty. **NOTE:** The 3DXXX Cyberspace Support CFETP lists additional skill-level requirements which are required by all 3DXXX AFSCs.

10. Specialty Qualification Requirements.

10.1. Apprentice (3-Level) Training.

KNOWLEDGE	System Administration. Database Administration. Operating Systems Administration. Scripting. Remote Device Configuration. SOA (Service Oriented Architecture). Application Systems Administration. Web Technology. Configuration Management. Legal/Ethics. Techniques for Solving Operating System Problems.
EDUCATION	For entry into this specialty, completion of High School or General Education Development Equivalency is mandatory. Additional education in Computer and Information Systems Technology is desirable.
TRAINING	Completion of the E3AQR3D032 00AA , IT Fundamentals Course; E3AQR3D032 00BB, Cyber Systems Operation Course, (PDS Code Y4I); and E3ABR3D032 00BB, Cyber Systems Operations Security+ Certification Course.
EXPERIENCE	Systems Administration and/or Software Development, Testing, and Quality Assurance is desired.
OTHER	For award and retention of AFSC 3D032, must maintain Air Force Network access according to AFMAN 33-282, <i>Computer Security (COMPUSEC)</i> . Specialty requires routine access to Top Secret material or similar environment. For award and retention of 3D032, successful completion of a Single Scope Background Investigation (SSBI) according to AFI 31-501 <i>Personnel Security Program Management</i> is mandatory. NOTE: Award of the 3-skill level without a completed Single Scope Background Investigation (SSBI) is authorized provided an interim SSBI has been granted according to AFI 31-501.
IMPLEMENTATION	Attendance at the Cyber Systems Operation Apprentice course is mandatory for award of the 3-skill level unless waived by the 3D0XX AFCFM.

10.2. Journeyman (5-Level) Training.

KNOWLEDGE	All 3D032 knowledge qualifications apply to the 3D052 requirements: Completion of the 3DX5X and 3D052 Career Development Courses.
TRAINING	No mandatory AETC training courses are required for upgrade. Completion of 5-level training track CBTs. Completion of all 5-level requirements outlined in the 3DXXX Cyberspace Support CFETP.
EXPERIENCE	Qualification in and possession of AFSC 3D032. Cyber Systems Operations Functions (i.e., System Operations and Micro- and Multi-User Technical Support, System Restoral, Resource Counting, or Security). Completion of all STS core tasks. Completion of applicable AFJQsSs/AFQTPs. Completion of all local tasks assigned for the duty position. Possession of appropriate commercial certification IAW AFMAN 33-285, <i>Cybersecurity Workforce Improvement Program</i> , is required.
OTHER	For award and retention of AFSC 3D052, must maintain an Air Force Network access and IA Certification IAW AFMAN 33-282, <i>Computer Security (COMPUSEC)</i> and AFMAN 33-285, <i>Cybersecurity Workforce Improvement Program</i> . Specialty requires routine access to Top Secret material or similar environment. For award and retention of 3D052, successful completion of a SSBI according to AFI 31-501, <i>Personnel Security Program Management</i> is mandatory.
IMPLEMENTATION	Entry into formal journeyman upgrade training is accomplished once individuals are assigned to their first duty station. Qualification training is initiated anytime individuals are assigned duties for which they are not qualified. Use CDCs, CBTs and AFJQsSs/AFQTPs concurrently to obtain the necessary qualification for refresher and cross-utilization training.

10.3. Craftsman (7-Level) Training.

KNOWLEDGE	All 3D052 knowledge qualifications apply to the 3D072 requirements. Work Center Supervisory Roles and Responsibilities. Computer System Project Management. Computer System Planning. Deployment Management.
TRAINING	Completion of the E6ACW3DX7X 01AA Cyberspace Career Advancement Course is mandatory. Completion of 7-level training track CBTs if available. Completion of all 7-level requirements outlined in the 3DXXX Cyberspace Support CFETP.
EXPERIENCE	Qualification in and possession of AFSC 3D052. Supervising functions such as Analysis Of System Failure and Restoral, Cyber Systems Operations, Command and Control Systems Support, System Administration, and Resource Management. Completion of all STS core tasks. Completion of applicable AFJQs/AFQTPs. Completion of all local tasks assigned for the duty position. Must maintain appropriate commercial certification IAW AFMAN 33-285, <i>Cybersecurity Workforce Improvement Program</i> .
OTHER	For award and retention of AFSC 3D072, must maintain an Air Force Network access and IA Certification IAW AFMAN 33-282, <i>Computer Security (COMPUSEC)</i> and AFMAN 33-285, <i>Cybersecurity Workforce Improvement Program</i> . Specialty requires routine access to Top Secret material or similar environment. For award and retention of 3D072, successful completion of a SSBI according to AFI 31-501, <i>Personnel Security Program Management</i> is mandatory.
IMPLEMENTATION	Entry into OJT is initiated when individuals obtain the necessary rank and skill level. Qualification training is initiated anytime an individual is assigned duties for which they are not qualified. Use CDCs and AFJQs/AFQTPs concurrently to obtain the necessary qualification for refresher and cross-utilization training.

10.4. Superintendent (9-Level) Training. 3D190 skill level requirements are listed in the 3DXXX Cyberspace Support (Common Core) CFETP.

10.5. Training Sources.

10.5.1. AFSC specific training - 336 TRS, Keesler AFB, MS at <https://etca.randolph.af.mil/>.

10.5.2. CDCs for 3DXXX/3D0X2 are available for upgrade purposes through the unit training manager or online at Air University. For individual qualification and cross-utilization training, CDCs are ordered through the unit training office.

10.5.3. AFJQs/AFQTPs are Air Force publications and are mandatory for use by personnel in upgrade or qualification training. They are developed by the 81 TRSS (Q-Flight), Keesler AFB, MS and may be downloaded from Q-Flight share point at:

https://cs3.eis.af.mil/sites/20946/AFKN_Docs/Forms/AllItems.aspx. Procedures for requesting development of AFJQs/AFQTPs are contained in AFI 33-154, *Air Force On-the-Job Training Products for Cyberspace Support Enlisted Specialty Training*. AFJQs/AFQTPs are listed in Part II, Section C, of this CFETP.

Section D - Resource Constraints

11. Purpose. This section identifies known resource constraints that preclude optimal/desired training from being developed or conducted, including information such as cost and manpower. Included are narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training, the resources needed, and actions required satisfying the training requirements.

12. Apprentice (3-Level) Training. There are no constraints.

13. Journeyman (5-Level) Training. There are no constraints.

14. Craftsman (7-Level) Training. There are no constraints.

15. Superintendent (9-Level) Training. There are no constraints.

Section E - Transition Training Guide

There are currently no transition training requirements. This area is reserved.

PART II

Section A - Specialty Training Standard

- 1. Implementation.** This STS will be used for technical training provided by AETC for the 3-level class E3AQR3D032 00BB beginning TBD.
- 2. Purpose.** As prescribed in AFI 36-2201, *Air Force Training Program*, and this STS:
 - 2.1.** Lists in column 1 (Task, Knowledge, and Technical Reference) the most common tasks, knowledge, and technical references (TR) necessary for airman to perform duties in the 3-, 5-, and 7-skill level. Column 2 (Core Tasks) identifies, by asterisk (*), specialty-wide training requirements. **NOTE:** Core tasks are minimum task training requirements for upgrade to the 5-skill level.
 - 2.2.** Provides certification for OJT. Column 3 is used to record completion of tasks and knowledge training requirements. Use automated training management systems to document technician qualifications, if available. For initial certification or transcribing documentation complete the columns in accordance to AFI 36-2201.
 - 2.3.** Shows formal training and correspondence course requirements. Column 4 shows the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the correspondence course. See the Air Force Career Development Academy (AFCDA) CDC/eCDC catalog maintained at <https://cs3.eis.af.mil/sites/AE-ED-02-37> for current CDC listings.
 - 2.4.** Qualitative Requirements. Attachment 1 contains the tasks, knowledge, and proficiency levels referenced in paragraph 2. Columns are marked with a proficiency code to indicate subjects taught. An X in the proficiency code column indicates a lack of student man-years and instructor resources. Trainees without prerequisites specified in Education and Training Course Announcement (ETCA) cannot be expected to meet proficiency levels indicated.
 - 2.5.** Becomes a job qualification standard (JQS) for on-the-job training when placed in AF Form 623, *Individual Training Record* folder, and used according to AFI 36-2201, *Air Force Training Program*.
 - 2.6.** Is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests (SKT) are developed at the Airmen Advancement Division by senior NCOs with extensive practical experience in their career fields. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the Enlisted Promotion References and Requirements Catalog (EPRRC). Individual responsibilities are listed in chapter 1 of AFI 36-2605, *Air Force Military Personnel Testing System*. WAPS is not applicable to the Air National Guard or Air Reserve Forces.

3. Recommendations. Comments and recommendations are invited concerning the quality of AETC training. A Training Feedback Hotline has been installed for the supervisors' convenience. For a quick response to concerns, call our Training Feedback Hotline at DSN 597-4566, fax us at DSN 597-3790, or e-mail us at 81trg-tget@us.af.mil. Reference this STS and identify the specific area of concern (paragraph, training standard element, etc.).

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

WILLIAM J. BENDER, Lieutenant General, USAF
Chief, Information Dominance and
Chief Information Officer

Attachments:

1. Qualitative Requirements
2. Specialty Training Standard (STS) 3D0X2

PREFACE

NOTE 1: Users are responsible for annotating technical references to identify current references pending STS revision. Locate current Air Force publications at:

DOD Issuances and OSD Administrative Instructions at <http://www.dtic.mil/whs/directives/>

Air Force publications at <http://www.e-publishing.af.mil/>.

AFSSIs at <https://cs3.eis.af.mil/sites/OO-SC-IA-01/default.aspx>.

(**NOTE:** Membership to the COMSEC site is limited to COMSEC personnel.)

DISA Circulars and Instructions at <http://www.disa.mil/About/DISA-Issuances>

Technical Orders (TO) at <https://www.my.af.mil/etims/ETIMS/index.jsp>

AF e-Learning at <https://usafprod.skillport.com>

NOTE 2: Knowledge and/or performance tasks are defined in the AFJQS. AFJQS items set the standard for qualification and certification and are mandatory for use in conjunction with this STS when applicable to the duty position.

NOTE 3: All objectives are trained during wartime.

NOTE 4: Track and manage training for TSgts and below and MSgt/SMSGt retrainees using Training Business Area (TBA).

NOTE 5: When an AFJQS is loaded into TBA, AFJQS task numbering will vary from the STS. The numbering scheme is defined by your work center specific master training plan.

NOTE 6: Third person certification is not required for all Cyber Systems Operations personnel. However, members (to include civilians and contractors) assigned to crew positions are still required position certification in accordance with Stan/Eval procedures.

NOTE 7: Senior NCO's in the 3DXXX AFSCs are not required to have an Individual Training Plan (ITP) with the following exceptions: personnel in upgrade training status, or performing equipment maintenance as part of primary duties. Unit Commanders can require Senior NCO's with UTC tasks to have an ITP.

NOTE 8: Task will be taught IAW CompTIA Security+ Certification CTS.

Qualitative Requirements

<p><i>THIS BLOCK IS FOR IDENTIFICATION PURPOSES ONLY</i></p> <p>Personal Data – Privacy Act of 1974</p>		
PRINTED NAME OF TRAINEE (<i>Last, First, Middle Initial</i>)	INITIALS (<i>Written</i>)	Last 4 of SSN
PRINTED NAME OF TRAINER AND CERTIFYING OFFICIAL AND WRITTEN INITIALS		
N/I	N/I	

Qualitative Requirements

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 only on hardest parts. (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 task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
**Subject Knowledge Levels	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify 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)
Explanations		
<p>* 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. (Example: b and 1b)</p> <p>** A subject knowledge scale value is 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. This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.</p> <p>(-) This mark is used alone in Proficiency Codes Course columns to show that training is required but not given due to limitations in resources.</p> <p>NOTE: All tasks and knowledge items shown with a proficiency code are trained during wartime.</p> <p>(-) When this code is used in the Core & Wartime Tasks Column it indicates that the qualification is a local determination.</p> <p>(5) When this code is used in the Core & Wartime Tasks Column it indicates the CFM has mandated this task as a core 5-level requirement. The training to satisfy this requirement is either provided through OJT, CBTs, CDCs, or a combination.</p> <p>(7) When this code is used in the Core & Wartime Tasks Column it indicates the CFM has mandated this task as a core 7-level requirement. The training to satisfy this requirement is either provided through OJT, CBTs, CDCs, or a combination.</p>		

CDC column. The use of proficiency coding indicates the level of knowledge training provided by the CDCs. The CDC column will now identify the subject knowledge level covered in the CDC. Information pertaining to the meaning of the code can be located in the STS coding system table.

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
1. CYBER SYSTEMS OPERATIONS CAREER FIELD										
TR: AFH 33-337; AFIs 10-401, 33-100, 33-101, 33-115, 33-150; 36-2101; 3D0X2 CFETP; AFECD										
1.1. Structure	-						A	-	-	-
1.2. Read CFETP 3D0X2 Part I	5						-	-	-	-
1.3. Air Force Specialty Code (AFSC) 3D0X2										
1.3.1. Progression within the AFSC	5						A	-	-	-
1.3.2. Duties of AFSC	5						A	-	-	-
2. SAFETY/RISK MANAGEMENT (RM)										
TR: AFI 90-802 and 91-203										
2.1. Air Force Consolidated Occupational Safety Instructions for AFSC	5						A	A	-	-
2.2. Hazards of the AFSC	5						A	A	-	-
3. UTILIZE PUBLICATIONS AND DIRECTIVES										
TR: AFIs 33-Series; AF Records Distribution System ; http://www.e-publishing.af.mil/										
3.1. Use Publications when Performing Work	5						-	-	-	-
4. INFORMATION ASSURANCE TECHNICAL (IAT) LEVEL II / INFORMATION ASSURANCE MANAGEMENT (IAM) LEVEL I CERTIFICATION (or higher level certification, see DISA IASE website: http://iase.disa.mil/iawip)										
4.1. CompTIA Security+ Certification TR: 3DXXX - CTS E3ATR3DX3X 00AC (See Note 8)	5						-	-	-	-
4.2. Maintain Continuing Education Credits	-						-	-	-	-
5. NETWORK ENCLAVES										
TR: AFIs 33-115, 33-116; DISACs 310-70-1; http://www.disa.mil/Services/Network-Services/Data										
5.1. NIPRNET	5						A	B	-	-
5.2. SIPRNET	5						A	B	-	-
5.3. Other Networks (e.g. CENTRIX, NSANET, Coalition, etc.)	-						-	-	-	-
5.4. Cross Domain Solution (CDS) Technology TR: AFI 33-200/Air Force IA website (https://private.afca.af.mil/ip)	-						-	-	-	-
5.4.1. Definition	-						A	A	-	-
5.4.2. Categories	-						A	A	-	-
6. AFCYBER WEAPONS SYSTEMS										
TR: AFCYBER Weapons Systems CONOPS (http://www.afspc.af.mil/library/factsheets/index.asp)										

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
6.1. Missions	5						-	A	-	-
6.2. Descriptions	5						-	A	-	-
7. INFORMATION PROTECTION (IP) OPERATIONS										
TR: ACP 122(F); AFH 31-602; AFIs 33-115, 33-200, 33-230, 33-332; AFPD 33-2; AFMAN 33-282; TO 31S5-4-2987-1										
7.1. Identification and Authentication	5						A	B	-	-
7.2. Remanence Security	5						A	B	-	-
7.3. Certification and Accreditation (e.g. System/Network)	5						A	B	-	-
7.4. INFOCON										
7.4.1. Defense in-Depth TR: Books 24/7, book: "Computer and Information Security Handbook", Chaps 3, 4, 5, 14, 23 & 33										
7.4.1.1. Tactics, Techniques, and Procedures TR: AFTTP 3-1 Reference										
7.4.1.1.1. Definition	5						A	B	-	-
7.4.1.1.2. Concept	5						B	B	-	-
7.4.1.1.3. Defensive Counter Information (DCI)	-						B	-	-	-
7.4.2. Threats and Vulnerabilities										
7.4.2.1. Internal										
7.4.2.1.1. Insider Threat (Data Theft, Unauthorized Access/Transfer, etc.)	5						A	A	-	-
7.4.2.1.2. Administrator Errors	-						A	A	-	-
7.4.2.1.3. System Failure (Hardware, Software, Environmental, etc.)	-						A	A	-	-
7.4.2.1.4. Internal Mitigation Mechanisms	-						-	A	-	-
7.4.2.2. External										
7.4.2.2.1. Viruses and Other Malicious Logic TR: TO 00-33A-1109										
7.4.2.2.1.1. Computer Virus Threats	5						B	B	-	-
7.4.2.2.1.2. Virus Indicators	5						A	B	-	-
7.4.2.2.1.3. Virus Prevention Methods	5						A	B	-	-

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
7.4.2.3. Identity Theft (Social Engineering, Phishing, etc.)	-						A	B	-	-
7.4.2.4. Hackers (Espionage, Political Activists, Criminals)	-						-	B	-	-
7.4.2.5. Threat Advisory Roles/Responsibilities of US Cyber Command TR: AFI 33-115	5						A	B	-	-
7.4.2.6. Mitigation Mechanisms	-						B	B	-	-
7.4.2.7. Counter-Measures	-						B	B	-	-
8. INFORMATION TECHNOLOGY SYSTEMS FUNDAMENTALS										
TR: AF e-learning: book "Beginning Programming for Dummies", course "Memory, Motherboards, and Processors (123905_eng)"										
8.1. Programming Languages	5						A	B	-	-
8.2. Graphical User Interfaces (GUI)	5						A	B	-	-
8.3. Digital Numbering Systems Conversion (Binary and Hexadecimal)	5						-	B	-	-
8.4. Data Flow	5						A	-	-	-
8.5. Memory Structure (e.g. Buffers)	5						A	B	-	-
8.6. Interrupt Requests (IRQ)	5						A	B	-	-
8.7. Drivers	5						A	B	-	-
8.8. Basic Input/Output System (BIOS)	5						A	B	-	-
8.9. Programmable Read-Only Memory (PROM)	5						A	B	-	-
8.10. Complementary Metal-Oxide-Semiconductor (CMOS)	5						A	B	-	-
8.11. Client Servers (e.g. Thin Client, Terminal Services)	5						A	B	-	-
9. SERVERS										
TR: AFMAN 33-152; AFI 33-115; Section 508 of the Rehabilitation Act (29 U.S.C. 794d); Local COOP procedures; United States Government Configuration Baseline (USGCB) http://usgcb.nist.gov/index.html										
AF e-Learning courses: "Microsoft Windows Server 2012 – Administering: DNS" (ws_admn_a05_it_enus); "Microsoft Windows Server 2012 - Installing and Configuring: Security" (ws_icfg_a14_it_enus); "Microsoft Windows Server 2012 R2 - Administration: File Services and Encryption" (ws_admo_a03_it_enus); "Microsoft Windows Server 2012 R2 - Configuring Advanced Services: VMs and DR" (ws_cfat_a02_it_enus); "Microsoft Windows Server 2012 – Administering: GPO Manipulation and Processing" (ws_admn_a12_it_enus); "Getting Started with Programming (78978_eng)"; "Introducing Cloud Computing"; "Cloud Technology Enablers"; "Securing Applications, Virtualized Environments, and Cloud Computing"; "Storage Virtualization"; "VMware Datacenter Overview"; "VMware Server Overview"; "Virtualization Management in Essentials 2010"; "Virtualization with VMware: An Overview"; "VMware Desktop Overview".										
Books 24x7: "Microsoft Windows PowerShell 2.0 Programming for the Absolute Beginner, Second Edition (ISBN: 9781598638998)"; "Windows PowerShell 2.0 Best Practices (ISBN: 9780735626461)"; "Virtualization For Dummies (ISBN: 9780470148310)"; "Grids, Clouds and Virtualization (ISBN: 9780857290489)"; "Virtualization Essentials (ISBN: 9781118176719)"; "The Best Damn Server Virtualization Book Period: Including VMware, Xen, and Microsoft Virtual Server (ISBN: 9781597492171)"; "Professional XEN Virtualization (ISBN: 9780470138113)".										

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.1. Hardware										
9.1.1. Redundant Array of Independent Disks (RAID) Configuration	5						A	B	-	-
9.1.2. I/O Technologies (SATA, IDE, SCSI, USB, etc.)	5						A	B	-	-
9.1.3. Memory	5						A	B	-	-
9.1.4. Blade/Backplane Technologies	-						-	-	-	-
9.1.5. Storage (e.g. SAN, NAS)	-						A	B	-	-
9.2. Virtualization Overview										
9.2.1. Concepts										
9.2.1.1. Benefits of Virtualization	5						A	B	-	-
9.2.1.2. Technologies and Application	5						A	B	-	-
9.2.1.3. Virtualization Security	5						A	B	-	-
9.2.2. Server Virtualization										
9.2.2.1. Host Server Operating System	5						A	B	-	-
9.2.2.2. Host Server Hardware	5						A	B	-	-
9.2.3. Virtualization Environment										
9.2.3.1. Migrate to a Virtual Environment	5						-	B	-	-
9.2.3.2. Manage a Virtual Environment	5						-	B	-	-
9.2.3.3. Create a Virtualized Storage Environment	5						-	B	-	-
9.2.4. Implement Virtualization										
9.2.4.1. Implement VMware Server	5						-	B	-	-
9.2.4.2. Implement Microsoft Windows Server® Virtualization	5						-	A	-	-
9.2.4.3. Implement XEN	-						-	A		
9.2.5. Client Virtualization										
9.2.5.1. Client Virtualization Software	-						A	B	-	-
9.2.5.2. Create Virtual Machines	-						-	B	-	-
9.2.5.3. Manage Virtual Clients	-						-	B	-	-

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.2.6. Cloud Computing TR: AF e-Learning CBT "Introducing Cloud Computing"										
9.2.6.1. Definition TR: NIST SP800-145	-						-	A	-	-
9.2.6.2. Characteristics	-						-	A	-	-
9.2.6.3. Service Model Types	-						-	A	-	-
9.2.6.4. Deployment Models Types	-						-	A	-	-
9.2.6.5. Benefits	-						-	A	-	-
9.2.6.6. Implementation Considerations	-						-	A	-	-
9.3. Software										
9.3.1. Operating Systems										
9.3.1.1. Windows [®] Environment										
9.3.1.1.1 Directory Services TR: AFJQS 3D0X2 200CI AF e-Learning courses: "Server Installation and Configuration for Server+", "Microsoft Exchange Server 5.5: Advanced Internet Features (EX5514E)", "Overview of SQL Server 2000 (31478_eng)", "Backing Up SQL Server 2000 Databases (31556_eng)", "Installing, Configuring, and Upgrading SQL Server 2000 (31489_eng)", Security in a Microsoft SQL Server 2000 Environment (31499_eng)", "SQL Server 2000 Databases (31493_eng)", "Administering and Configuring Internet Information Services 5.0 (35690_eng)", "Restoring SQL Server 2000 Databases (31560_eng)"										
9.3.1.1.1.1. Install/Configure Domain Name System (DNS)	-						2b	B	-	-
9.3.1.1.1.2. Install/Configure Dynamic Host Configuration Protocol (DHCP)	-						2b	B	-	-
9.3.1.1.1.3. Domain Definitions (Root, Forest, Domain, Child Domain, Object, Flexible Single Master Operations [FSMO] Role Holder)	-						A	B	-	-
9.3.1.1.1.4. Create a Domain	-						2b	B	-	-
9.3.1.1.1.5. Active Directory										
9.3.1.1.1.5.1. Configure Organizational Units (OUs)	-						2b	B	-	-
9.3.1.1.1.5.2. Create Objects (User, Printer, Computer, Group)	-						2b	B	-	-
9.3.1.1.1.5.3. Configure Group Policy Object (GPO)	-						2b	B	-	-
9.3.1.1.1.5.4. Manage User Accounts (Lock/Unlock, Changing Attributes)	-						2b	B	-	-

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.3.1.1.1.5.5. Provision/Deprovision Users	-						2b	B	-	-
9.3.1.1.1.5.6. Restrict Login Access	-						2b	B	-	-
9.3.1.1.1.5.7. Query Searches	-						2b	B	-	-
9.3.1.1.1.5.8. Move Objects	-						2b	B	-	-
9.3.1.1.1.5.9. Add/Remove Users from Groups	-						2b	B	-	-
9.3.1.1.1.6. Application Services										
9.3.1.1.1.6.1. Install Exchange	-						2b	b	-	-
9.3.1.1.1.6.2. Structured Query Language (SQL)	-						A	B	-	-
9.3.1.1.1.6.3. Internet Information Services (IIS/WEB)	-						A	B	-	-
9.3.1.1.1.6.4. Internet Security and Acceleration (ISA) Server	-						A	B	-	-
9.3.1.1.1.6.5. Configure File/Print Server	-						2b	-	-	-
9.3.1.1.2. File Management Procedures										
9.3.1.1.2.1. Build System Hierarchy	-						2b	b	-	-
9.3.1.1.2.2. Set Permissions	-						2b	b	-	-
9.3.1.1.2.3. Accounts										
9.3.1.1.2.3.1. Create	-						2b	b	-	-
9.3.1.1.2.3.2. Modify	-						2b	b	-	-
9.3.1.1.2.3.3. Delete	-						2b	b	-	-
9.3.1.1.2.3.4. Assign Privileges	-						2b	b	-	-
9.3.1.1.2.4. Optimize System	-						2b	b	-	-
9.3.1.1.3 Windows Scripting (PowerShell®)										
9.3.1.1.3.1. Command-Line Environment	-						A	B	-	-
9.3.1.1.3.2. Scripting										
9.3.1.1.3.2.1. Purpose	5						A	B	-	-
9.3.1.1.3.2.2. Variables	5						-	-	-	-
9.3.1.1.3.2.3. Conditional Statements	5						-	-	-	-
9.3.1.1.3.2.4. Looping Statements	5						-	-	-	-

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.3.1.1.3.2.5. Functions	5						-	-	-	-
9.3.1.1.3.2.6. Write Basic Script	-						-	-	-	-
9.3.1.1.3.2.7. Programming Paradigms										
9.3.1.1.3.2.7.1. Procedural	-						-	A	-	-
9.3.1.1.3.2.7.2. Object-Oriented										
9.3.1.1.3.2.7.2.1. Properties	-						-	A	-	-
9.3.1.1.3.2.7.2.2. Methods	-						-	A	-	-
9.3.1.1.4. Process Management										
9.3.1.1.4.1. Identify Processes	-						-	-	-	-
9.3.1.1.4.2. Stop/Start Processes	-						-	-	-	-
9.3.1.1.4.3. Understand Process Dependencies	-						-	-	-	-
9.3.1.2. UNIX										
9.3.1.2.1. File Management Procedures										
9.3.1.2.1.1. Hierarchy Systems	-						-	B	-	-
9.3.1.2.1.2. Permissions	-						-	B	-	-
9.3.1.2.2. Accounts										
9.3.1.2.2.1. Create	-						-	B	-	-
9.3.1.2.2.2. Modify	-						-	B	-	-
9.3.1.2.2.3. Delete	-						-	B	-	-
9.3.1.2.2.4. Assign Privileges	-						-	B	-	-
9.3.1.2.3. Software Patch										
9.3.1.2.3.1. Local	-						-	A	-	-
9.3.1.2.3.2. Remote	-						-	A	-	-
9.3.1.2.4. Optimize System	-						-	A	-	-
9.3.1.2.5. UNIX File System Structure	-						-	B	-	-
9.3.1.2.6. Basic UNIX Commands	-						-	A	-	-
9.3.1.2.7. System Services	-						-	-	-	-
9.3.1.2.8. Network Services	-						-	-	-	-
9.3.1.2.9. Administer File Systems	-						-	A	-	-
9.3.1.2.10. Administer Print Services	-						-	A	-	-

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.3.1.2.11. Configure Network Services	-						-	-	-	-
9.3.1.2.12. Perform Remote System Commands	-						-	-	-	-
9.3.1.2.13. Shells										
9.3.1.2.13.1. Types	-						-	B	-	-
9.3.1.2.13.2. Scripting	-						-	B	-	-
9.3.1.2.14. ASCII Text Editor (e.g. VI Editor)	-						-	B	-	-
9.3.1.2.15. Setup/Manage Disk Quotas	-						-	B	-	-
9.3.1.2.16. Security Management										
9.3.1.2.16.1. Administer Basic Host Security	-						-	-	-	-
9.3.1.2.16.2. Monitor System	-						-	-	-	-
9.3.1.2.17. Troubleshoot	-						-	-	-	-
9.3.1.2.18. Process Management										
9.3.1.2.18.1. Identify Processes	-						-	-	-	-
9.3.1.2.18.2. Stop/Start Processes	-						-	-	-	-
9.3.1.2.18.3. Process Dependencies	-						-	-	-	-
9.3.1.3. Mobile OS Technologies										
9.3.1.3.1. IOS Overview	-						-	-	-	-
9.3.1.3.2. Android Overview	-						-	-	-	-
9.3.1.3.3. Blackberry Overview	-						-	-	-	-
9.3.2. Applications										
9.3.2.1. Functional Systems (e.g. Utilities, TBMCS, GCCS, DCGS, etc.)	-						A	A	-	-
9.3.2.2. Support Systems (e.g. SCCM, WSUS, SMARTS, TMS, Network Monitoring Tools, App Manager, Blackberry etc.)	-						A	A	-	-
9.3.2.3. Collaborative Tools (e.g. SharePoint, IWS, DCO, OCS, NCES, etc.)	-						A	A	-	-

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		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.3.2.4. Server Information Protection Software (e.g. Common, Intrusion Detection Director Systems (CIDDs), Anti-virus)	-						A	A	-	-
9.3.2.5. Remote Access (e.g. VPN, Citrix)	-						A	A	-	-
9.3.2.6. Backup/Restore	-						-	A	-	-
9.3.3. Database Fundamentals (e.g. Oracle, SQL)										
9.3.3.1. Facts and Principles										
9.3.3.1.1. Flat File	-						A	B	-	-
9.3.3.1.2. Relational	-						A	B	-	-
9.3.3.1.3. Relational Database Structures	-						A	B	-	-
9.3.3.2. Use SQL										
9.3.3.2.1. Query	-						2b	-	-	-
9.3.3.2.2. Manipulate	-						2b	-	-	-
9.3.3.2.3. Generate Reports	-						2b	-	-	-
9.3.4. Web Fundamentals TR: AFMAN 33-152; Section 508 of the Rehabilitation Act (29 U.S.C. 794d)										
9.3.4.1. Language (e.g. HTML, XML, JavaScript, Java, .NET)	-						A	B	-	-
9.3.4.2. Web Security										
9.3.4.2.1. Session Management	-						A	B	-	-
9.3.4.2.2. Secure Socket Layer	-						A	B	-	-
9.3.4.3. Web Application	-						A	B	-	-
9.3.4.4. Service Oriented Architecture (SOA) (e.g. Web Services)	-						A	B	-	-
9.4. Remedy TR: Books: "Remedy 7.5 Incident Management and Change Management User Manual"										
9.4.1. Overview	-						-	B	-	-
9.4.2. Profile Information	-						-	B	-	-
9.4.3. Create Incident Tickets	5						-	B	-	-

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
9.4.4. Work/Resolve Incidents as Support Staff	5						-	B	-	-
9.4.5. Change Management	-						-	A	-	-
9.4.6. Search Incident Tickets in Remedy	-						-	A	-	-
9.4.7. Service Request Management (SRM) Tool	-						-	A	-	-
9.5. Disaster/Contingency /Operational/Crisis										
9.5.1. Backup/Restore	-						A	B	-	-
9.5.2. Offsite Storage	-						A	A	-	-
9.5.3. Continuity of Operations (COOP)	-						A	A	-	-
9.5.4. Priority Restoration Plan	-						A	A	-	-
9.5.5. Alternate Power	-						A	A	-	-
10. NETWORKED SYSTEMS										
TR: AFI 33-115; AFMANs 33-152 and 33-153										
10.1. Overview	-						A	B	-	-
10.2. Definition	-						A	B	-	-
10.3. Network Authentication										
10.3.1. Public-Key Infrastructure (PKI)										
10.3.1.1. Common Access Card (CAC)	5						A	B	-	-
10.3.1.2. Certificate Authority (CA) Server	-						A	B	-	-
10.3.1.3. Certificate Revocation List (CRL)	-						A	B	-	-
10.3.1.4. Server Middleware	-						A	B	-	-
10.3.2. Bio Metrics	5						A	B	-	-
10.3.3. Username/Password	5						A	B	-	-
10.4. Network Addressing										
10.4.1. Perform Addressing (e.g. Sub-Netting)	5						2b	b	-	-
10.4.2. Interface Protocols (e.g. SNMP)	5						B	B	-	-
10.4.3. Network/System Auditing TR: AFI 33-200										
10.4.3.1. Monitor Events (e.g. Invalid Log-On)	5						A	B	-	-
10.4.3.2. Monitor Resources	5						A	B	-	-

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
10.5. Startup and Shutdown	5						b	b	-	-
10.6. Systems Management										
10.6.1. Overview										
10.6.1.1. Fault Management (i.e. Outages, System Degradation)	5						A	B	-	-
10.6.1.2. Configuration	5						A	B	-	-
10.6.1.3. Security	5						A	B	-	-
10.6.1.4. Performance	5						A	B	-	-
10.6.1.5. Accounting	5						A	B	-	-
10.7. Event Response										
10.7.1. Incident/Event Reporting TR: AFIs 10-201 and 33-115	5						A	B	-	-
10.7.2. Incident Response	5						A	B	-	-
10.8. Use Network Management Software										
10.8.1. Customize System	5						-	B	-	-
10.8.2. Monitor System Performance	5						2b	B	-	-
10.9. Troubleshoot Network Connectivity Issues TR: CompTIA Network+ N10-005 In Depth; CompTIA A+ 220-801, 220-802 In Depth (AF E-Learning/Books 24x7)										
10.9.1. Hardware TR: 220-801, 2014 - Ch 13	5						2b	B	-	-
10.9.2. Windows and Applications TR: 220-801, 2014 - Ch 12	5						2b	B	-	-
10.9.3. Windows Startup Problems TR: 220-801, 2014 - Ch 14	5						2b	B	-	-
10.9.4. Network TR: N10-005, 2013 - Ch 13	5						2b	B	-	-
11. EXPEDITIONARY COMMUNICATIONS										
TR: ACPs 117(N), 121(H), 122(F), 131(F); AFI 10-401; AFJMAN 23-210; AFMAN 33-153; DISAC 310-D70-30; CJCSM 6231.01										
11.1. Deployable Communications Systems TR: AFMAN 33-116										
11.1.1. Communications Support (e.g. TDC)										

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		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
11.1.1.1. Mission	-						A	B	-	-
11.1.1.2. Employment Concepts	-						A	B	-	-
11.1.1.3. Capabilities	-						A	B	-	-
11.1.1.4. Interfacing Considerations	-						A	B	-	-
11.1.2. TDC Deployment										
11.1.2.1. Pre-Deployment	-						A	B	-	-
11.1.2.2. Deployment	-						A	B	-	-
11.1.2.3. Establish Services	-						A	B	-	-
11.1.2.4. Troubleshoot	-						-	-	-	-
11.1.2.5. Extended Services	-						A	B	-	-
11.1.2.6. Re-Deployment	-						A	B	-	-
11.1.2.7. Reconstitute	-						A	B	-	-
12. BOUNDARY PROTECTION TR: AFIs 33-115, 33-200										
12.1. Firewall TR: Approved Firewall Installation/Configuration Guide										
12.1.1. Various Firewalls										
12.1.1.1. Telephony	5						A	A	-	-
12.1.1.2. IP	5						A	A	-	-
12.1.1.3. Host-Based TR: Books 24/7, book: "Computer and Information Security Handbook", Chaps 4, 14, 23, & 33 - 17.5.6. Security tools (e.g. firewalls)	5						A	A	-	-
12.2. General System Tasks										
12.2.1. Power Up	-						-	-	-	-
12.2.2. Reboot	-						-	-	-	-
12.2.3. Backup/Restore	-						A	-	-	-
12.2.4. Enable/Disable Firewall Servers	-						-	-	-	-
12.2.5. Burb Configuration	-						-	B	-	-
12.2.6. Modify Interface Configuration	-						-	-	-	-
12.2.7. Configure Remote Management	-						-	-	-	-

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
12.3. Access Control List (ACL) and Group Management TR: Approved Firewall Administration Guide										
12.3.1. ACLs	-						B	B	-	-
12.3.2. Groups	-						B	B	-	-
12.3.3. Troubleshoot ACL	-						-	-	-	-
12.4. Proxies Connections through the Firewall TR: Approved Firewall Administration Guide										
12.4.1. Firewall Proxies	5						B	B	-	-
12.5. Using IP Filter TR: Approved Firewall Administration Guide										
12.5.1. Configure Transmission Control Protocol (TCP)/ User Datagram Protocol (UDP) Rules	-						-	-	-	-
12.5.2. Configure Network Address Translation (NAT) for TCP/UDP Protocols	-						-	-	-	-
12.5.3. Set IP Filter NAT Port Rewrite Range	-						-	-	-	-
12.5.4. Specify IP Filter Rule Source	-						-	-	-	-
12.5.5. Specify Number of TCP/UDP IP Filter Sessions	-						-	-	-	-
12.5.6. Configure Non-TCP or UDP Protocol Rule	-						-	-	-	-
12.5.7. Configure Rule Properties	-						-	-	-	-
12.5.8. Load IP Filter Database	-						-	-	-	-
12.5.9. Delete IP Filter Database	-						-	-	-	-
12.6. Internal Network Use with Firewall's Domain Name System (DNS) TR: Approved Firewall Administration Guide	-						-	B	-	-
12.7. Electronic Mail TR: Approved Firewall Administration Guide										
12.7.1. Check Administrator Mail Messages on Firewall	-						-	-	-	-
12.7.2. Manage Simple Mail Transfer Protocol (SMTP)	-						-	-	-	-

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
12.7.3. Reconfigure Existing Mail Configuration	-						-	-	-	-
12.7.4. Edit Mail Configuration Files	-						-	-	-	-
12.7.5. Redirect Mail	-						-	-	-	-
12.7.6. Allow or Deny Mail on a User Basis	-						-	-	-	-
12.7.7. Enable SMTP Server	-						-	-	-	-
12.7.8. Enable Send Mail ACL Checking	-						-	-	-	-
12.7.9. Manage Mail Queues	-						-	-	-	-
12.8. Monitoring and Alarms TR: Local Procedures										
12.8.1. Firewall Monitoring	-						-	B	-	-
12.8.2. Active Network Connections	-						-	B	-	-
12.9. Web Proxy										
12.9.1. Function	5						A	A	-	-
12.9.2. Types	5						A	A	-	-
12.9.3. Review Security Logs	-						2b	-	-	-
12.9.4. Trace Web Traffic	-						2b	-	-	-
12.9.5. Web Traffic Filtering	-						-	A	-	-
12.10. SMTP Relay										
12.10.1. Function	5						A	A	-	-
12.10.2. Location	5						A	A	-	-
12.10.3. Review Security Logs	-						2b	-	-	-
12.10.4. Trace Email Traffic	-						2b	-	-	-
12.10.5. Email Traffic Filtering	-						-	A	-	-
13. VULNERABILITY ASSESSMENT TR: TO 00-33A-1109; DISAC 300 series										
13.1. Air Force Standard Vulnerability Assessment (VA)Tools TR: TO 31S5-4-2987-1										
13.1.1. Functions	5						A	A	-	-
13.1.2. Install Agent	-						-	-	-	-
13.1.3. Install Enterprise Console	-						-	-	-	-

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
13.1.4. Register an Agent with the Manager	-						-	-	-	-
13.1.5. Access Console Via Workstation	-						-	-	-	-
13.1.6. Certification and Accreditation Policy										
13.1.6.1. Create a Weekly	-						-	-	-	-
13.1.6.2. Create a Yearly	-						-	-	-	-
13.1.7. Evaluate an Executed Security Scan	-						-	-	-	-
13.1.8. Legal and Licensing Responsibilities	-						-	-	-	-
13.2. Functions of a Vulnerability Assessment Tool (e.g. ISS)	-						-	A	-	-
13.3. Conflicts with Host Base Firewalls	-						-	-	-	-
13.4. Install Security Patches	-						-	B	-	-
14. INTRUSION DETECTION										
TR: AFI 33-200										
14.1. Function	5						A	A	-	-
14.2. Intrusion Detection Methods (e.g. Host, Network)	5						A	A	-	-
14.3. Intrusion Detection Tools (e.g. ASIM, ITA)	5						B	B	-	-
14.4. Conduct Traffic Analysis	-						-	-	-	-
14.5. Identify Incidents	-						-	-	-	-
14.6. Characterize Incidents	-						-	-	-	-
14.7. Incident Reports	-						-	-	-	-
14.8. Host Based Intrusion Detection Systems										
14.8.1. Functions	5						A	A	-	-
14.8.2. Install	-						-	-	-	-
14.8.3. Configure (i.e. Console, Manager, Agent)	-						-	-	-	-
14.8.4. Maintain	-						-	-	-	-
14.8.5. Review Logs	-						-	-	-	-
14.8.6. Respond to Events	-						-	-	-	-
14.9. Event Response										
14.9.1. Reporting Hierarchy										
TR: TO 00-33A-1109										

1. TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	2. CORE & WARTIME TASKS	3. Certification for OJT					4. PROFICIENCY CODES USED TO INDICATE TRAINING/INFORMATION PROVIDED			
		A	B	C	D	E	3 SKILL LEVEL	5 SKILL LEVEL	7 SKILL LEVEL	9 SKILL LEVEL
		START DATE	STOP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFIER INITIALS	Course	CDC	OJT	OJT
14.9.1.1. Incident/Event Reporting	5						-	A	-	-
14.10. Implement Incident Response										
14.10.1. First Responder Basics	5						-	B	-	-
14.10.2. Incident Response Preparation	5						-	B	-	-
14.10.3. Key Concepts of Cyber Evidence Collection for First Responder to an Incident	5						-	B	-	-
14.11. Network-Based Intrusion Detection System										
14.11.1. Wired										
14.11.1.1. Function	5						A	A	-	-
14.11.2. Wireless										
14.11.2.1 Function	5						A	A	-	-
15. COMPUTER-BASED TRAINING										
TR: AF e-Learning										
15.1. Complete 3D0X2 5-Skill Level AF e-Learning Training Track	5						-	-	-	-

Section B - Course Objective List

4. Measurement. Each objective is indicated as follows: W indicates task or subject knowledge, which is measured using a written test, PC indicates required task performance which is measured with a performance progress check, and PC/W indicates separate measurement of both knowledge and performance elements using a written test and a progress check.

5. Standard. The standard is 70% on written examinations. Standards for performance measurement are indicated in the objective and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check and students may be required to repeat all or part of the behavior until satisfactory performance is attained.

6. Proficiency Level. Most task performance is taught to the “2b” proficiency level which means the student can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step-by-step procedures for doing the task.

Section C - Support Materials

7. The following list of support materials is not all-inclusive; however, it covers the most frequently referenced areas. The most current products can be found at the 81 TRSS/TSQ web page, and are available for download from the web site at https://cs3.eis.af.mil/sites/20946/AFKN_Docs/Forms/AllItems.aspx. Procedures for requesting product development are found in AFI 33-154.

7.1. Generic AFJQs/AFQTPs applicable to AFSC 3D0X2:

<u>Publication No.</u>	<u>Pseudo File Code</u>	<u>Publication Title</u>
AFJQS3D0X2-200CD	N/A	Boundary Protection Specialist
AFJQS3D0X2-200CF	N/A	Messaging Technician
AFJQS3D0X2-200CI	N/A	Network Services Technician
AFJQS3D0X2-200G	N/A	Air Operations Center Communications- Computer
AFJQS3D0X2-209HS	N/A	Host-Based Security System (HBSS)
AFJQS3D0X2-230D	N/A	Theater Battle Management Core System (Unit Level)
AFJQS3D0X2-230I	N/A	Network Common Operational Picture
AFJQS3DXXX-200TBA	N/A	Training Business Area (TBA) Handbook
AFJQS3DXXX-230T	N/A	Remedy
AFQTP 3DXXX-200D	N/A	Integrated Maintenance Data System
AFQTP 3DXXX-213R	N/A	Contract Agreements
AFQTP 3DXXX-225E	N/A	Cyberspace Support Functional Manager’s Handbook

7.2 Generic E-Learning CBTs supporting Security+ CE credits

Section D - Training Course Index

8. Purpose. This section of the CFETP identifies training courses available for continuation/ supplemental training. For information on all formal courses, refer to the Air Force Education and Training Course Announcements (ETCA) database, at <https://etca.randolph.af.mil/>

9. Air Force In-Residence Courses

<u>Course Number</u>	<u>Course Title</u>	<u>Location</u>
E3AQR3D032 00AA	IT Fundamentals	Keesler
E3AQR3D032 00BB	Cyber Systems Operations	Keesler
E3ABR3D032 00BB	Cyber Systems Operations Security+ Certification	Keesler

10. Air University A4/A6 Courses.

For a current listing of Air University A4/6 courses <http://www.au.af.mil/au/catalogs.asp>.

11. Exportable Courses.

For a current list of the available CBT courses refer to *AF e-Learning* at <https://usafprod.skillport.com/> or through the AF Portal at <https://www.my.af.mil/>.

Section E - MAJCOM Unique Requirements

12. There are currently no MAJCOM unique requirements. This area is reserved.