

Electronic Warfare

(Rescind 201810)

1. Introduction

a. Purpose. The purpose of EW is to deny adversaries an actual or perceived advantage in and through the EMS and ensure friendly unimpeded access to the same. EW Soldiers provide the land force commander with capabilities required to plan and coordinate the conduct of electronic attack, electronic protection and EW support activities in support of unified land operations. EW supports the mission command warfighting function staff task to conduct cyber electromagnetic activities, which are leveraged to seize, retain, and exploit an advantage in both cyberspace and the electromagnetic spectrum, while simultaneously denying and degrading threat use of the same, and protecting the mission command system. Cyber electromagnetic activities consists of cyberspace operations, EW, and spectrum management operations. Cyberspace operations are offensive and defensive in nature and EW is composed of electronic attack, electronic protection and EW support. EW officers understand and articulate the electromagnetic environment and its impacts on operations while integrating and synchronizing cyber electromagnetic activities in support of the land force commander's objectives.

b. Proponent information. The proponent for Army EW is the CG, Cyber Center of Excellence, Fort Gordon, GA. Further information can be obtained through <http://www.gordon.army.mil>. CG, Combined Arms Center's action agency is the Electronic Warfare proponent office, located at 950 Bluntville Lane, Building 391, Fort Leavenworth, KS 66027-2100. Telephone contact information is DSN 552-9463 or commercial (913) 684-9463.

c. Functions. EW is predominately joint in nature and is a developing, dynamic career field in the Army. It is essential for denying or degrading (offensive electronic attack) enemy operations while ensuring the protection and survivability of friendly systems and units operating within the electromagnetic environment. The Army Electronic Warfare officer (EWO) is the commander's subject matter expert for all operations in and through the EMS. EW is a technical capability that resides within the mission command warfighting function and must effectively coordinate across all of the other warfighting to successfully support unified land operations.

2. Officer characteristics required

a. Characteristics required of all officers. All officers are expected to possess the base characteristics that will enable them to develop into agile and adaptive leaders. These leaders must be grounded in Army Values and the Warrior Ethos, competent in their core proficiencies, and broadly experienced to operate across the spectrum of conflict. They must be able to operate with unified action partners and leverage capabilities beyond the Army in achieving their objectives. Officers must be culturally astute and able to use their awareness and understanding to conduct operations innovatively and courageously to exploit opportunities in the challenges and complexities of the operational environment. Further explanation of these characteristics can be referenced in ADP 1-0, ADP 3-0, ADRP 1-0, ADRP 3-0, and in DA PAM 600-3 on the Army Publishing Directorate website.

b. Unique knowledge and skills of an Electronic Warfare officer. The EWOs—

(1) Possess a firm understanding of intelligence preparation of the battlespace and the military decision-making process (MDMP), and provide valuable, relevant feedback affecting mission accomplishment and unit survivability.

(2) Be skilled in building teamwork within an organization.

(3) Capable of operating without direct oversight or guidance—self-motivated.

(4) Possess the ability to express oneself clearly, concisely and accurately, both orally and in writing, and be able to make presentations to the commander and staff for decision-making purposes.

(5) Represent EW equities to commanders and staffs that may not understand the importance and relevance of this critical capability.

(6) Apply doctrinal knowledge and translate technical data into useable information to solve the tactical problems, and formulate and defend solutions to problems using current Army and joint doctrine.

(7) understand the principles of the EMS and frequency management.

(8) Understand and integrate area of responsibility lessons learned in a tactical environment.

(9) Possess a baccalaureate degree.

(10) Possess top secret/sensitive compartmented information access prior to attending the EW Qualification Course.

c. Functional competencies. FA 29 officers plan, coordinate, synchronize, and deconflict cyber electromagnetic activities operations at all levels. Additionally FA 29 officers perform a wide range of tasks, but are not limited to: management and coordination of friendly EW systems, EW effects assessment, integration of EW capabilities into the staff processes, integration of non-organic EW support, and integration of cyberspace operations in support of unified land operations. These capabilities-when applied across warfighting functions-enable EWOs to leverage the spectrum to achieve effects that support the commander's endstate. An Army EWO primarily serves on staffs at BCT through ASCC. The EWO—

(1) Advises commander and staff on the cyber electromagnetic activities capabilities, limitations, legal considerations and employment.

(2) Advises the commander and staff on the targeting requirements for cyber electromagnetic activities.

(3) Plans, coordinates, integrates, and assesses cyber electromagnetic activities to support the ground force commander.

(4) Leads the organic cyber electromagnetic activities element and forms the cyber electromagnetic activities working group.

(5) Assists the G-2/S-2 in developing the threat (cyber/EW) characteristics during the intelligence preparation of the battlefield process.

(6) Deconflicts EW operations with spectrum manager(s).

(7) Develops and maintains a current assessment of available EW resources.

(8) When designated, serves as the jamming control authority.

(9) Prepares, submits for approval, and supervises the issuing and implementation of orders/fragmentary orders for cyber electromagnetic activities operations.

3. Officer development

a. Officer development model. FA 29 has numerous opportunities for career development. The goal of the professional development of EW officers is to produce and sustain highly-qualified and experienced officers who will be able to integrate the use of cyber electromagnetic activities capabilities for commanders at progressively higher levels of command. The officer development model is focused more on the quality and range of experience, rather than the specific gates or assignments required to progress.

(1) Initial entry officers gain experience during basic branch assignments and gain a foundation for future success as an FA 29 officer. All officers should have attended a branch CCC and had successful company command prior to entry into FA 29.

(2) All FA transfers are handled by VTIP. This panel standardizes functional transfers, meets dynamic FA/branch requirements, and empowers officers to make informed career decisions by providing flexible and viable career paths. The VTIP panel convenes quarterly.

(3) Officers are encouraged to seek out both civilian and military educational opportunities. Military-orientated training for all EW officers include Army Cyberspace Operations Planners Course, Special Technical Operations Planners Course, Network Attack Course, EW Coordination Course, and Joint EW Theater Operations Course.

(4) Flexible time lines allow officers to take personal responsibility for the design of their careers by making informed and logical decisions and acting on them. The Army Career Tracker is a career management tool allowing officers to work with a chosen mentor, map out a career timeline, and view career opportunities. The Army Career Tracker integrates training, assignment history, formal and informal education information from 15 databases and systems into one interactive and easy-to-use interface. Used

properly, this tool facilitates structured mentorship and can be utilized and revised by successive mentors as an officer progresses in experience. Login at <https://actnow.army.mil>.

(b) *Lieutenant development.* EW branch is a volunteer non-accession branch that draws its officers from other branches of the Army at the entry rank of captain. FA 29 has no authorized/assigned lieutenants.

(c) *Captain development.* The professional development objective for this phase is to serve as a staff officer in the operating force developing tactical skills and expanding capabilities through developmental assignments.

(1) Education. Completion of CCC and FAQ.

(2) Assignments.

(a) Key developmental. All captain billets are considered developmental positions. Officers assessed into FA 29 should expect to rotate between KD positions at BCTs, and multifunctional brigades in order to gain a cyber electromagnetic activities operational perspective in order to prepare for future joint assignments.

(b) Broadening assignments. Officers should view the concept of broadening as a purposeful expansion of a leader's capabilities and understanding provided through opportunities internal and external to the Army. Broadening is accomplished across an officer's full career through experiences and/or education in different organizational cultures and environments. The intent for broadening is to develop an officer's capability to see, work, learn and contribute outside each one's own perspective or individual level of understanding for the betterment of both the individual officer and the institution. Broadening opportunities may vary in scope, responsibility, and developmental outcomes. These positions are typically self or branch nominative in nature and typically fall in four major categories listed below.

(1) Functional/institutional. Captains should view these assignments as directly related to EW, but provide the opportunity to develop a wider range of knowledge and skills useful in an Army specific environment or a broader joint context. Examples of these assignments include those to special operations units, Asymmetric Warfare Group, CTC, and the Centers of Excellence.

(2) Academia and civilian enterprise. Opportunities not available for EW captains.

(3) Joint/multinational. Limited opportunities available for EW captains.

Interagency/intergovernmental. Opportunities not available for EW captains.

(3) Self-development. Captains should continue to gain an in-depth understanding of MDMP and concentrate on those critical EW tasks required to accomplish their wartime mission while winning on the battlefield. These provide the foundation of knowledge required to effectively serve as a staff officer at the brigade or division level. Emphasis should be maintained on historical and current lessons learned as they apply to tactical and leadership challenges.

(d) *Major development.* The professional development objective for this phase is to expand the officer's tactical and technical experience. As a result, the officer will develop as an EW warrior and leader with a comprehensive understanding of operations in a joint and expeditionary environment. FA 29 majors continue to develop their knowledge and understanding of the operational force by serving as a staff officer at brigade through corps level. These assignments ensure FA 29 officers are prepared for increasingly complex, developmental assignments.

(1) Education. All FA 29 majors must successfully complete the FA 29 qualification training and the U.S. Command and General Staff College officer resident or nonresident course or a sister Service ILE course to be JPME I qualified. Majors will also be able to compete for attendance at the SAMS, Training with Industry, and advanced civil schooling.

(2) Assignments.

(a) Key developmental. All FA 29 billets are considered KD positions.

(b) Broadening assignments. Broadening opportunities may vary in scope, responsibility and developmental out-comes and typically fall in four major categories listed below:

(1) Functional/institutional. Majors should view these assignments as directly or indirectly related to EW, but provide the opportunity to develop a wider range of knowledge and skills useful in an Army specific environment or a broader joint context. Examples of these assignments include those to special operations units, Asymmetric Warfare Group, CTCs, HRC, Centers of Excellence, HQDA, and the EW program manager office.

(2) Academia and civilian enterprise. These assignments focus on civilian industry and knowledge, skills, and abilities not generally obtained from organic experiences, training or education. Examples include Training with Industry and fellowships.

(3) Joint/multinational. These assignments are joint opportunities related or unrelated to EW that require routine interaction with JIIM organizations and personnel. Examples include assignments at FORSCOM, Army Central Command, U.S. Army Europe, U.S. Army Africa, U.S. Army Pacific, NATO headquarters, and Joint Electronic Warfare Center. While not every officer will receive an assignment in a qualifying joint assignment or serve a fellowship in a JIIM agency, the goal is to provide the maximum opportunity for FA 29 majors to receive JIIM experience. The JIIM assignments for FA 29 majors are dependent on Army demands and position/fellowship availability.

(4) Interagency/intergovernmental. These opportunities are more politically and policy oriented. Examples include NSA and other agencies outside DOD.

(3) Self-development. FA 29 majors are expected to continue self-development efforts to build organizational leadership, strategic perspective and hone operational skills. Continued learning, supported by both civilian and military education, provides critical opportunities to develop both joint and expeditionary competencies. Officers should stay abreast of technical developments through formal and informal study including EW trade and professional journals. Majors should begin or continue work on a graduate degree related to EW. Examples include engineering disciplines related to electronics, computers, telecommunications, and data communications systems. IT, systems engineering and operations research also provide excellent educational background.

(e) *Lieutenant colonel development.* The professional development objective for this phase is demonstrated excellence in tactical skills, technical proficiency, and a greater contribution to the FA and the Army.

(1) Education. There is no educational requirement. Successful completion of JPME II is desired.

(2) Assignments.

(a) Key developmental. All FA 29 billets are considered KD positions. These EW positions are primarily within Army division, corps, ASCC, Army headquarters, or joint staff.

(b) Broadening assignments. Broadening opportunities may vary in scope, responsibility, and developmental out-comes and typically fall in four major categories listed below:

(1) Functional/institutional. Lieutenant colonels should view these assignments as directly or indirectly related to EW, but provide the opportunity to develop a wider range of knowledge and skills useful in an Army specific environment or a broader joint context. Examples of these assignments include TCM EW, EW course director, select Center of Excellence, and at HQDA.

(2) Academia and civilian enterprise. These assignments focus on civilian industry and knowledge, skills and abilities not generally obtained from organic experiences, training or education. Examples of these assignments include Training with Industry and fellowships.

(3) Joint/multinational. These assignments are joint opportunities related or unrelated to EW that require routine interaction with JIIM organizations and personnel. Examples of these assignments are those at FORSCOM, Army Central Command, U.S. Army Europe, U.S. Army Africa, NATO headquarters, and Joint Electronic Warfare Center.

(4) Interagency/intergovernmental. These opportunities are more politically and policy oriented. Examples include NSA and other agencies outside DOD.

(3) Self-development. During this phase, self-assessment, continuous learning, and perfecting mentoring and managerial skills are essential to officer development. The officer should continue to hone his or her combined arms warfighting skills and understanding of the joint operational environment. In addition, officers should continue to read books from the CSA's professional reading list to improve critical thinking and understanding of the profession of arms.

(f) *Colonel development.* The professional development objective for this phase is sustainment of warfighting, training, technical and staff skills, along with utilization of leadership, organizational and executive talents. The objective of FA 29 colonel professional development is greater contribution to the FA and the Army. FA 29 colonels will integrate the full spectrum of EW and cyberspace capabilities at operational levels by serving on joint, combatant command, corps, ACOM, or ASCC staffs.

(1) Education. FA 29 colonels should successfully complete SSC either resident or nonresident. Successful completion of JPME II is desired.

(2) Assignments.

(a) Key developmental. All FA 29 billets are considered KD positions. These EW positions are primarily within Army corps, ASCC, Army headquarters, or joint staff.

(b) Broadening assignments. Broadening opportunities may vary in scope, responsibility, and developmental out-comes and typically fall in four major categories listed below:

(1) Functional/institutional. Colonels should view these assignments as directly or indirectly related to EW, but provide the opportunity to develop a wider range of knowledge and skills useful in an Army specific environment or a broader joint context. Examples of these assignments include TCM EW, and HQDA.

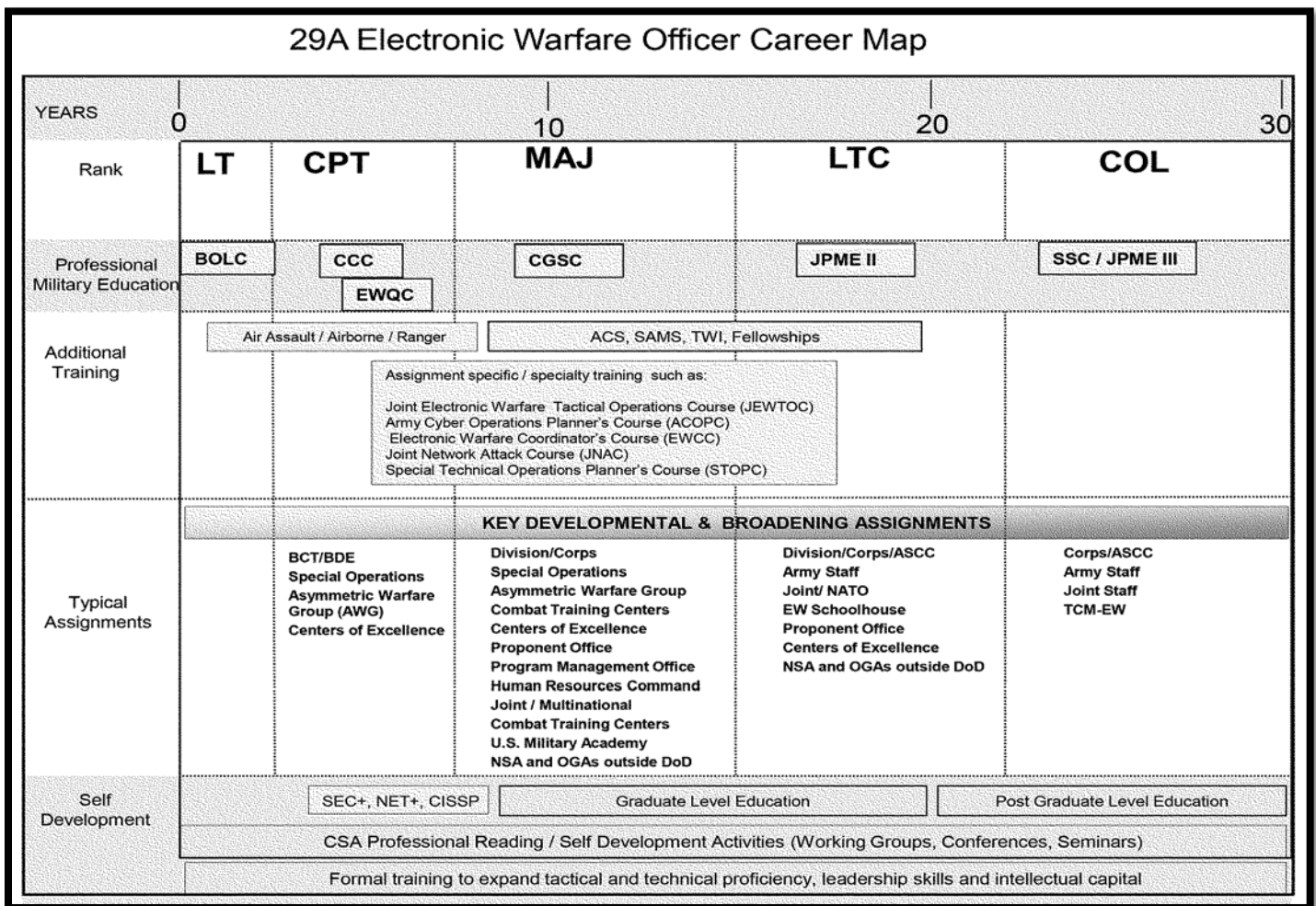
(2) Academia and civilian enterprise. These assignments focus on civilian industry and knowledge, skills, and abilities not generally obtained from organic experiences, training, or education. Examples of these assignments include Training with Industry and fellowships.

(3) Joint/multinational. These assignments are joint opportunities related or unrelated to EW that require routine interaction with JIIM organizations and personnel. FA 29 officers are encouraged to seek joint education and duty assignments to achieve joint status.

(3) Interagency/intergovernmental. These opportunities are more politically and policy oriented. Examples include NSA and other agencies outside DOD.

(4) Self-development. FA 29 colonels must maintain their core skills and remain current on all changes that affect the Soldiers they manage. Officers also need to stay current on industry trends through trade associations and journals, and by participating in DOD and industry sponsored forums.

Figure 1 - FA 29 officer career development



4. Warrant officer development

a. *Characteristics required of Electronic Warfare technicians.* The Electronic Warfare technician (EWT), 290A, is an intelligent and adaptive problem-solver, capable of providing workable solutions to complex problems, with limited resources. The 290A serves as a resident technical and tactical EW expert prepared to organize, manage, and lead EW elements. The EWT must understand relationships,

teamwork, and interpersonal dynamics and have the ability to integrate these concepts to achieve effects. They must be the consummate professional; self-motivated and self-disciplined, and live the Army Values. The EWT must possess the ability to build concise products. The EWT must have a secret clearance with the ability to obtain and maintain a top secret/sensitive compartmented information clearance; they must immediately initiate procedures to obtain the proper level of clearance upon notification of accession/selection as a 290A.

b. Unique knowledge and skills of an Electronic Warfare technician. The EWT is an EW technical expert, leader, trainer and advisor to commanders at all levels. The 290A must maintain a high degree of technical and tactical knowledge in regards to the effects of friendly and adversary EW systems on the electromagnetic spectrum and cyber-electromagnetic activities concepts useful to commanders. Through progressive levels of training, education, and assignments the EW warrant officer develops the ability to integrate cyber electromagnetic activities support from the BCT to the joint force headquarters level. EW warrant officers enhance a commander's ability to gain and maintain a tactical advantage in the electromagnetic spectrum. EWTs are mainly accessed from EW specialists (29E) who possess a high degree of success spanning multiple echelons and demonstrate technical expertise in all facets of EW.

c. Functions. The EWT analyzes, plans, organizes, implements, monitors, integrates, and assesses EW operations, threat environment, and technical requirements. The EWT will assist the intelligence staff in creating the enemy electronic order of battle and assist in updating the running estimate as far as EW is concerned. The EWT will work in concert with the fires cell/section to disrupt or destroy EW targets, whether by lethal or nonlethal means. The EWT, with a thorough understanding of equipment operational capabilities and limitations, and the EMS, provides advice on the technical and tactical employment of both organic and non-organic EW systems. The EWT focuses the efforts of these EW systems, both air and ground, against adversary personnel, facilities, or equipment with the intent of preventing adversarial employment, while protecting the use of all friendly EW operations through active coordination, integration and deconfliction. The EWT will integrate cyber electromagnetic activities into the targeting and planning process as well as assist in the development of the enemy/adversary threat (cyber/EW) characteristics, EW target information and products, intelligence, and target selection standards. Based on situational and battle analysis the EWT will make critical EW reprogramming recommendations. The EWT should have a general understanding and comprehension in general aspects of cyber operations. The EWT facilitates and manages unit maintenance oversight and training programs as it pertains to EW. The EWT will evaluate the technical and tactical operations of EW sections with regards to training, composure, and effectiveness. EWTs perform the following functions/tasks:

- (1) Advise commanders on capabilities and employment of cyber electromagnetic activities assets and capabilities.
- (2) Maintain and assist in development of the EW staff estimate.
- (3) Monitor electromagnetic spectrum (EMS) for indications and warnings enabling immediate threat recognition and targeting
- (4) Determine intelligence requirements, priorities, target selection standards (TSS), attack guidance, and targeting objectives for cyber electromagnetic activities.
- (5) Assist and coordinate with S-2/G2 on intelligence preparation of the battlefield and electronic order of battle as it pertains to EW.
- (6) DE conflict electronic attack/EW support with ACE/CM&D in the collection process.
- (7) Assist the EWO and staff in the analysis of the relevant/current situation and predict EW needs.
- (8) Implement electronic attack spectrum interference resolution and manage EW reprogramming, as required.
- (9) Coordinate external support for EW mission requirements and integrate EW into planning/targeting processes.
- (10) Conduct EW combat assessment in support of the targeting process.
- (11) Perform quality assurance, quality control, and prioritize EW requests from subordinate units.
- (12) Manage cyber electromagnetic activities training programs and all assets assigned.
- (13) Support 29A functions with cyber electromagnetic activities technical and tactical expertise and data

(14) Develop and mentor all EW Soldiers.

d. Warrant officer one/chief warrant officer two development.

(1) Entry level. Upon warrant officer selection, all NCO (warrant officer candidates upon arrival) will complete WOCS. WOCS provides the basic skills necessary to prepare the warrant officer candidate to become an effective Army warrant officer. WOCS consists of two phases: Phase 1 is available as both distributed learning and resident. Attendance at the resident phase is mandatory for all in the grade of E1 through E4 prior to entry into the program, non-Primary Leadership Development Course/Warrior Leader Course (or equivalent) graduates in the grade of E5, and all prior service Air Force, Navy, or Coast Guard personnel who have not completed Army or Marine Corps basic training. All others will complete phase 1 through DL. Phase 2, 5-week resident course at Fort Rucker, Alabama, for AA candidates or at one of the RC-regional training institutes for USAR or ARNG candidates is attended as resident training by all candidates. After graduation from WOCS and appointment to WO1, each officer will attend the 16 week WOBC at Fort Sill.

(2) Education. The 290A EW Technician Basic Course provides EW technicians the education, training, and core skills necessary to successfully perform EW in support of the Army EW program. Emphasis is on Army tactics, techniques, and procedures to prepare warrant officers to execute EW tactically at the brigade level encompassing a base line understanding of how it fits into joint operations. Junior grade warrant officers need to attend assignment oriented training to increase knowledge in joint EW operations, develop a basic understanding of cyber electromagnetic activities, increase joint targeting knowledge and increase knowledge in a related special skill area to increase competitiveness. Completion of the ST7000 Action Officer's Course is required once promoted to CW2 and before attendance to the WOAC. Completion of an associate's degree is a recommended goal prior to becoming eligible for promotion to CW3. Army Reserve warrant officers must complete WOAC prior to selection for CW3.

(3) Assignments. After WOBC, EWTs are primarily assigned to the cyber electromagnetic activities element of brigade and regimental size units.

(4) Self-development. Lifelong learning, supported by both civilian and military education, provides critical opportunities to develop both joint and expeditionary competencies throughout the warrant officer's career. Self-development during this phase should focus on critical reasoning and creative thinking skills for effective problem solving and decision-making centered on becoming experts in planning and integrating EW into operations. Access to joint and specialized education courses is highly recommended for EW technicians based on the needs of the specific unit.

(5) Desired experience. A thorough understanding and technical competence in EW systems, operations, intelligence, and the targeting and planning processes are desired. Continuous education, training, experience and self-development in the execution of joint EW prepare the warrant officer for future assignments and selection to CW3.

e. Chief warrant officer three development.

(1) Education. The WOAC focuses on advanced technical training and common leader development subjects designed to prepare officers for assignment in senior-level EW positions. The resident course consists of 8 weeks of advanced technical and tactical training in EW at the division, corps, Joint Task Force, or ASCC. WOAC should be completed no later than 1 year time in grade as a CW3. Army Reserve warrant officers must complete WOAC prior to selection to CW4.

(2) Assignments. CW3s will primarily be assigned to multifunctional brigades such as CAB, CA, MISO, or fires. Select warrant officers in the grade of W3 can also expect to receive assignments consistent with the needs of the Army, such as the following:

- (a) Special Forces groups.
- (b) Ranger regiment.
- (c) Service school (WOCS/WOBC).
- (d) Training/doctrine developer.
- (e) Special Operations Aviation Regiment.
- (f) Information operations field support teams.

(3) Self-development. Lifelong learning, supported by both civilian and military education, provides critical opportunities to develop both joint and expeditionary competencies throughout the warrant officer's career. Assignment oriented and joint training courses are needed to develop characteristics required of a senior technician based on current and projected duty assignments. Completion of a baccalaureate degree is a recommended goal prior to becoming eligible for promotion to CW4.

(4) Desired experience. CW3s need a minimum of 3–4 years BCT level EW technician experience prior to serving at the division level. This may include knowledge and skills developed and demonstrated abilities at a multifunctional brigade, an SF group, or some other special assignment to increase proficiency necessary for successful coordination and deconfliction between various types of units. Technical comprehension and competence in EW systems, operations, intelligence, and the targeting and planning processes at the brigade level need to be mastered prior to becoming a senior warrant officer (CW4).

f. Chief warrant officer four development.

(1) Education. WOSC is a 5-week professional development course with a DL component taught at the WOCC, Fort Rucker, AL. WOSC provides intermediate level PME and leader development training that prepares senior-level warrant officers (CW3/CW4) to function as staff officers, trainers, managers, systems integrators, and leaders at various levels of Army, joint organizations executing unified land operations thru decisive action. Army Reserve warrant officers must complete WOSSC prior to promotion to CW5.

(2) Assignments. CW4s will serve as EW technicians in positions at division, corps or in generating force organizations, such as the following:

- (a) Course manager (WOBC/WOAC).
- (b) Materiel developer.
- (c) HRC branch manager.
- (d) Joint Special Operations Command.
- (e) CTC.

(3) Self-development. CW4s should continue self-development efforts to enhance expertise in all aspects of EW, asset employment, and the targeting and planning processes to include joint and combined operations utilizing assignment oriented training. CW4s should devote time to beginning a graduate-level degree in an associated field of study. CW4s should attend WOSC by the 1 year time in grade point as a CW4. CW4s must attend WOSC for promotion to CW5.

(4) Desired experience. CW4s should have experience at the brigade and division level coupled with quality performance in a generating force position prior to being assigned to a corps, Joint Task Force, or ASCC EW element.

g. Chief warrant officer five development.

(1) Education. The WOSSC is a 2 phase course consisting of Phase 1 (DL) and a 4-week Phase 2 (resident) course attended by the Army's most senior warrant officers at Fort Rucker, AL. The educational goal is to provide senior CW4s or new CW5s with the master-level education, knowledge, and influential leadership skills necessary to apply their technical expertise in support of leaders on strategic level joint staffs during unified land operations. The WOSSC can be attended after 1 year time in grade to CW4 and should be completed by 1 year time in grade CW5. CW5s should continue work in an associated graduate-level field of study.

(2) Assignments. CW5s will serve as EW technicians in positions at corps, ASCC, JFHQ or as the service school/ branch lead. The senior designated CW5 generally serves as the chief warrant officer of the branch at the proponent.

(3) Self-development. CW5s should continue self-development efforts to enhance expertise in all aspects of EW to include joint and combined operations.

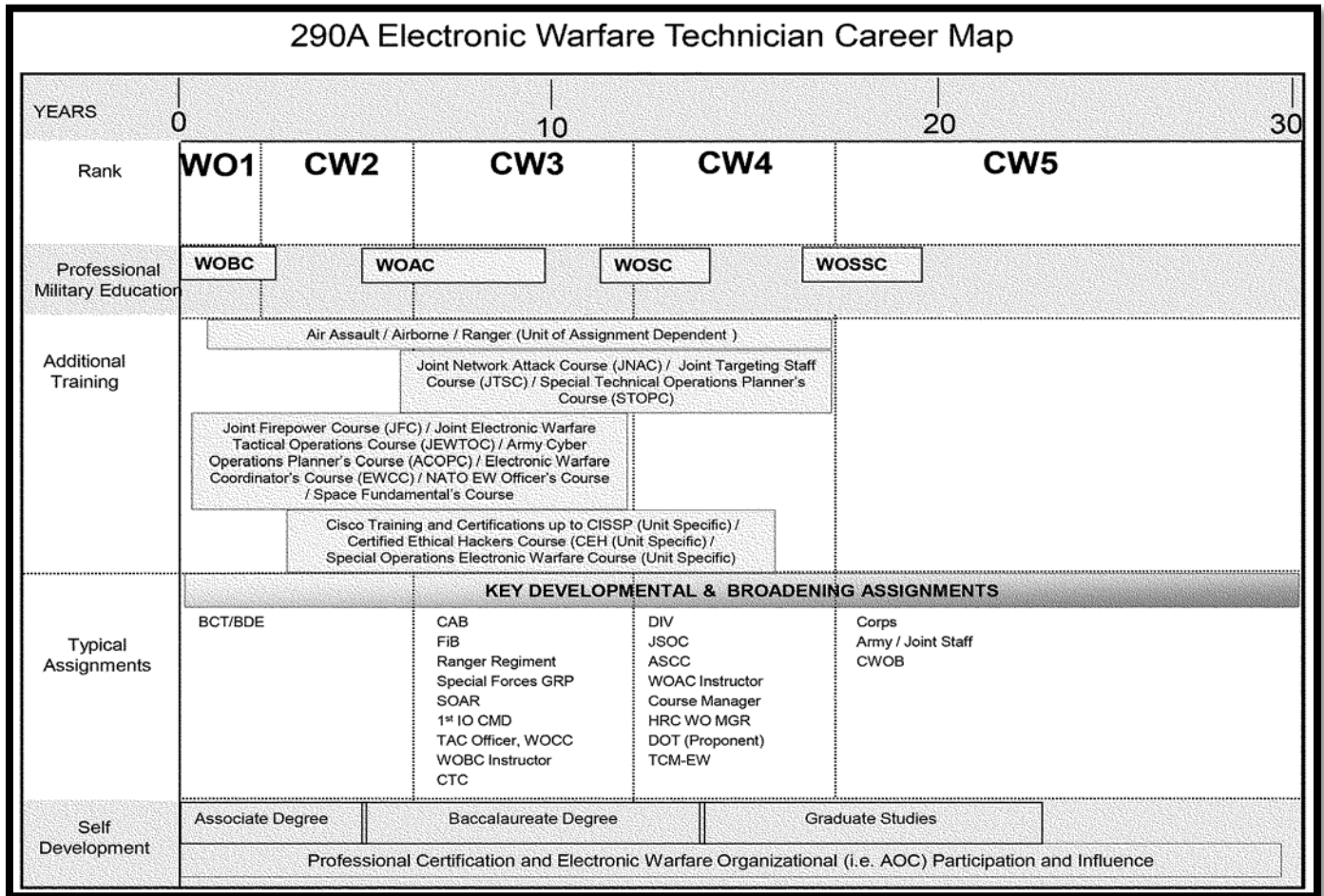
(4) Desired experience. CW5s should have EW experience at all levels and have attained proficiency of all critical tasks through combined experiences and career self-development in every facet of EW and associated career paths.

(5) Assignment oriented training. All EW technicians need to continue to seek assignment oriented training to maintain expertise in all aspects of joint targeting and special skill areas. Assignment oriented training includes, but is not limited to the following courses:

- (a) Joint Firepower Course; Nellis Air Force Base, NV.
- (b) Joint Targeting Staff Course, Norfolk NS, and VA.
- (c) Joint EW Theater Operations Course, San Antonio, TX
- (d) Joint Network Attack Course, Corry Station, Pensacola, FL.
- (e) Army Cyberspace Operations Planners Course, Fort Belvoir, VA.
- (f) Electronic Warfare Coordinator Course, Eglin Air Force Base, FL.
- (g) Special Technical Operations Planners Course, Fort Belvoir, VA.

- (h) NATO EW Officers Course, Oberammergau, Germany.
- (i) Space Fundamentals Course, Peterson Air Force Base, Colorado Springs, Co.

Figure 2 - FA 29 warrant officer career development



5. Reserve Component officers

a. General career development. RC officers are afforded the same qualification course training as AC EW officers. RC officers typically do not have a centralized functional category designation, but choose to transition into FA 29, normally at the senior company grade/junior field grade level, based on the needs of the officer and the unit.

b. Functional area qualification and development opportunities. RC officers may seek assignments requiring EW expertise that yield opportunities similar to their AC counterparts. Senior RC officers, who are well-grounded in their branch/FA, could increase their professional breadth by seeking assignments outside their basic branch/FAs in developmental positions that require leadership and managerial skills common to all officers.

(1) The qualification standards at each rank as well as PME requirements are the same as for AC officers.

(2) RC EW officers can expect to serve as EW planners at the brigade through division level. Duty assignments are based on force structure, available officers, unit readiness requirements and geographic considerations.

(3) RC officers with civilian-acquired skills in electronics, signals intelligence, computer network operations, communications or other EW-related fields are valuable to the Army. Officers with these skills

areas through employment or civilian education will be competitive for promotion and selection to EW positions of increased responsibility.

(4) RC officers should attend the same residence education courses as their AC counterparts.

c. Life-cycle development model. The life-cycle development model for EW officers and warrant officers are the same for RC officers as for AC officers and warrant officers, respectively. Consideration must be used for the unique circumstances of the RC officer or warrant officer when applying the applicable model's template.