

THE ARMY LEARNING MANAGEMENT SYSTEM OVERVIEW

PRODUCT MANAGER ARMY TRAINING INFORMATION SYSTEM (FORMERLY KNOWN AS DISTRIBUTED LEARNING SYSTEM)

1. GENERAL. The Army Learning Management System (ALMS) is the third component of the Army's evolutionary acquisition strategy to support Army training that is provided via Distributed Learning (DL). The previous efforts featured the construction and deployment of Digital Training Facilities (DTF) at Army installations worldwide and their subsequent networking and management through the Army Training Information System (ATIS) Enterprise Management Center (EMC), Fort Eustis, VA. ATIS also fielded the Deployed Digital Training Campuses (DDTC) in support of the unit-based, individual training of deployed Forces. As the latest component, ATIS delivered the Mobile Digital Training Facility (MDTF). MDTFs are designed to be connected to the unit's local area network for use wherever and whenever access to DL is needed.

2. THE ALMS. The ALMS is the Army-approved, centrally-managed and funded system for training management. The ALMS streamlines, consolidates, and provides a centralized point of delivery to accomplish the Army's training processes. The ALMS builds upon ATIS's supporting infrastructure and utilizes Department of Defense (DoD)-managed common user networks to implement a comprehensive, automated system for administering Army training throughout the Force. As designed, the ALMS can manage a student's training activities from initial entry and continue throughout his/her service. The ALMS provides course and training resource management, scheduling and registration functions, courseware distribution, delivery, and storage, and permanent record keeping of training activities and results.

a. **ALMS Background.** The ALMS was the third increment of a four increment Distributed Learning Systems (DLS) product. DLS was an Acquisition Category (ACAT) IV project that supports transformation of Army training through the use of information technology (IT). DLS was developed under an evolutionary acquisition strategy during FY09.

Functional requirements for the ALMS evolved during the late 1990s under the direction and oversight of Headquarters (HQ), U.S. Army Training and Doctrine Command (TRADOC). Contract award and system development began in 2000-2001. The system successfully underwent a Limited User Test performed by the Army Test and Evaluation Command in June 2004 and received Full-Rate Production approval in September 2004. Working from an Army-approved, installation-based fielding list developed by TRADOC, ATIS began ALMS fielding by conducting system user training at the Maneuver Support Center, Fort Leonard Wood, MO, in November 2004. ATIS performed a major software version upgrade for the ALMS in 2007, 2013, and 2019. Under the provision of the TRADOC Capability Manager, the ALMS requirements were rebaselined in 2013 to support the version.

Today, DLS, now PdM ATIS, is a modernized information technology infrastructure that provides access to individual and collective training, Army Modernization Training (AMT), and self-development courses to Soldiers and units, anywhere, anytime, using multiple means and technologies. PdM ATIS supports the Army goals of improved individual and unit readiness, less disruption of Army families, standardization of training and training management across the Army, and cost savings/cost avoidance for training events, while maintaining the quality of the training experience. All training is provided at no cost to the individual or unit in the Active Army, U.S. Army Reserves, Army National Guard, and Department of Army Civilians.

b. ALMS Fielding Status. As a fielded Army Acquisition product, the ALMS is currently in sustainment status. However, it continues to grow in utilization and functionality, as it stays current with Army training needs, and keeps pace with technical upgrades of commercial hardware and software that make up the ALMS.

c. ALMS Functions. The list below reflects the major system functions and capabilities of the ALMS:

1. Provides external data exchanges between the Army Training Requirements and Resource System (ATRRS), and the General Fund Enterprise Business System's (GFEBs) training support application.
2. Exports training completion data to the Army Career Tracker (ACT) and Digital Training Management System (DTMS).
3. Accepts and processes formatted lists of students needing specified training and exports training results.
4. Accepts and processes registration and enrollment requests for content Managed by the ALMS.
5. Schedules the appropriate resources (facilities, equipment, supplies, faculty, etc.) required to conduct directed and self-motivated education/training.
6. Supports multiple training delivery types, such as Web-based, instructor-led, collaborative, and curricula that have a blend of these types.
7. Identifies scheduling conflicts in real-time on user interface.
8. Manages online testing, including providing a restricted testing environment.
9. Records and reports training status and results through a variety of pre-formatted reports.
10. Distributes, delivers, stores, and presents, upon request, both SCORM-conformant and other standards-compliant education and training products.
11. Enforces prerequisites and other constraints when scheduling students for instructional units or as a requirement for registration.
12. Provides access to ALMS functionality with a Web browser-based interface for all users, without the need of additional client-side applications.
13. Provides classroom Instructors with automated grade book functions for recording Learner assessment results, attendance taking, and marking lesson completions.
14. Manages task and certification-based curricula.

15. Maintains training and education records and stores content associated with completed work as a reach-back capability.
16. Collects, stores, and reports evaluation feedback from education/training personnel and students for evaluation of the quality, value, efficiency, and effectiveness of education/training resources (instructional units, tests, instructors, etc.).
17. Maintains an inventory database of education/training products, resources, and materials.

The ALMS provides training management functions concentrated in the area of training delivery or execution. The diagram in Figure 1 shows the major ALMS functions in terms of discrete groupings of training and training management activities. In this diagram, blocks colored yellow represent interfaces with external automated information management systems; red represents ALMS core training support functions; and blue represents the classroom-oriented training execution experience.

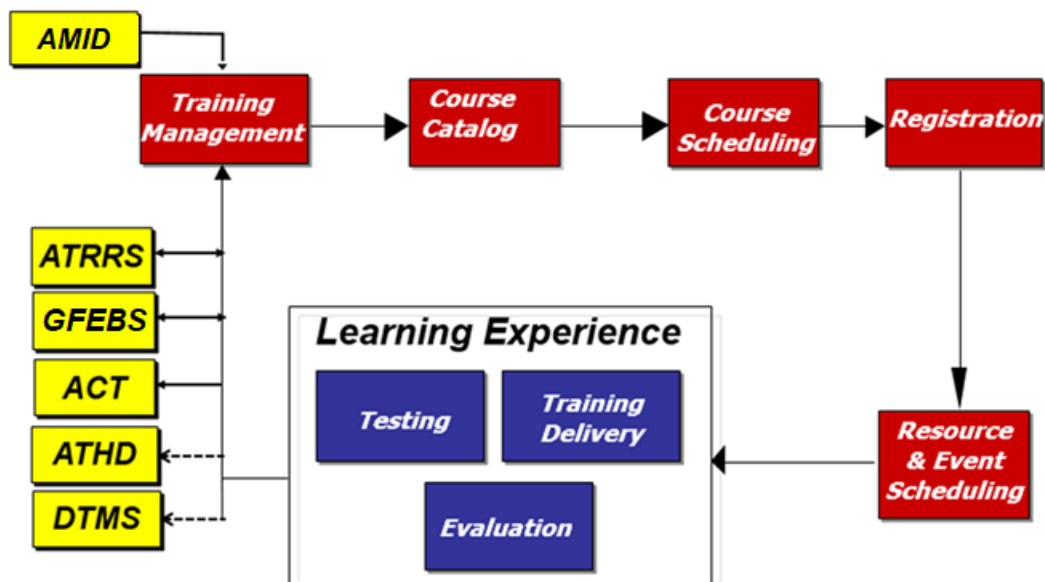


Figure 1. Major ALMS functions

Following is a brief description of training and training management activities represented in the diagram's blocks (clockwise from upper left).

AMID: The ALMS uses the Army Master Identity Directory as the directory server (LDAP) for identification of users to manage user access to the system. AMID sends the ALMS individual personal profile data extracted from the personal account data in AMID in response to message-based queries upon ALMS login. The ALMS utilizes Enterprise Access Management Service-Army (EAMS-A) for single sign-on authentication.

ATRRS: This represents the ALMS system interface with the ATRRS. ATRRS sends the ALMS course, course iteration, and individual registration data. The ALMS sends ATRRS course completion messages.

GFEBs: This is a Web service-based data exchange with a software application, GFEBs Automated Interface (GAI), managed by the GFEBs program office. GAI sends the ALMS personnel data about individuals targeted for GFEBs training, including their Organizations, Job Roles, Locations, and Audience Types, and the ALMS sends GAI certification data when Job Role-based curricula are completed. This data exchange highlights the ALMS capability to support task-based training.

ACT: This is a pre-formatted data export containing topic-level completion data to the ACT application.

DTMS/ATMS: This is a pre-formatted data push which sends task completion data for Mandatory Training Distributed Learning (MTDL) to the DTMS/ATMS FTP server, nightly.

Training Management: These are the activities required to manage training at the institution or Proponent level. These activities include reports and notifications, resource management, personnel management (e.g., instructor certifications and schedules).

Course Catalog: This is the online listing of course topics as presented and managed by the functional Proponents for the subject area. Learners can use several different methods to search for available training. Training managers control the visibility of “published” topics through availability dates and other administrative controls.

Course Scheduling: This is the scheduling of training iterations by start and end dates, which usually appear in the system via its ATRRS interface. Entries are used for long-term planning purposes and for establishing an iteration footprint upon which detailed lesson- or topic-level scheduling can be based.

Registration: Course registration can be performed by the Learner or authorized proxy on-the-spot within the Catalog if permitted by policy. If required, registration requests can trigger a request for approval by some named authority prior to processing the registration. By Army policy, registrations of courses managed by ATRRS must occur within that system and those registrations are transmitted into the ALMS via the interface for populating class rosters and linking the student with required training content. Results of registration immediately appear on the requestor’s ALMS homepage.

Resource and Event Scheduling: This is the detailed scheduling the class manager or scheduler performs to support instructor-led (resident) training. Scheduling is managed at the lesson/topic level- by hour, by room (training facility). Scheduling includes the

reservation of training resources associated with the lesson, to include the assignment of a specific instructor for any lesson or topic.

Training Delivery: Most often, the ALMS is used to deliver training content electronically via standards-based files or “courseware.” It can also store supporting documents uploaded by authorized users to an online library or as attachments to lessons or courses. The ALMS supports classroom instruction by offering the instructor a semi-automated means for recording grades, taking attendance, and marking lessons complete (delivered) to maintain student training history electronically and support automated update of ATRRS and other databases for course completion.

Evaluation and Testing: These capabilities involve the review of executed training through student feedback or performance-based instruments, such as critiques and exams, and the ability to build and deliver SCORM-conformant online tests, exams, surveys, and quizzes.

3. ALMS END USER SUPPORT. PdM ATIS is a member of the federation of organizations that make up the Army Training Help Desk (ATHD) for support of ALMS users. The ATHD provides a cadre of Tier 1 help desk agents who receive initial input from students and respond to resolve their incident or escalate it to the proper level for resolution. Most incidents are resolved at Tier 1. The ATHD includes agents for Proponents that have courseware or training supported by the ALMS, agents that support the system such as technicians and engineers, and management personnel at each member organization. Users can access ATHD on a 24/7 basis using an on-line ticketing system at <https://athd.army.mil>, or access live support using a toll-free telephone number, 1-800-275-2872.

4. ALMS USER ROLES. All ALMS users address the system from the perspective of a pre-defined “Role” in Army training. The most common of these Roles is the Learner; all ALMS users are Learners first and always. However, some individuals who are involved in Army Training management require system access and permissions, which are not permitted to those who only use the system to receive training (registration, viewing of records, etc.). These Army trainers are appointed to one or more descriptive Roles, which allow them to perform specified management and administration duties in the system (create Courses, manage Resources, etc.). Collectively, they are called Role-Based Users (RBUs).

The principal function of the ALMS Role is to govern permissions and restrictions related to various processes and data sets in the system. The Role names and associated functions generally follow a model for the management of Army training seen in numerous, but not all, training institutions.

During ALMS development, TRADOC, as the system’s Combat Developer, identified ALMS User Roles during the system’s design phase, completed in April 2002. The goal was to have the ALMS replicate, in automated form, the training business processes

previously being performed manually or with legacy automated systems. The alignment of ALMS roles with existing training community roles made a good fit in many cases. Thus, an individual who has performed course manager duties in the training community can easily fit into a Course Manager (CoM) Role for the ALMS. In general, the variety of ALMS Roles is smaller than can be found on a training unit or institution's organizational chart. That is because not every position has a clearly distinguishable function that can be, or needs to be, performed in the system.

Whether or not ALMS User Roles map precisely to actual duty positions in the using organization, the system's Roles provide all the functions necessary to perform the Army training execution mission. In addition, the system filters and hides from one Role-Based User the extraneous information and out-of-scope tasks which may be pertinent only to other users.

While the user's Role designation in the system directly determines what functions that user can perform on the ALMS, it also determines what functions *cannot* be performed by that individual within the ALMS. It should be noted that to achieve the flexibility required to fit existing business models in the Army training community, individuals are allowed to hold more than one Role in the ALMS, once properly appointed or designated.

a. ALMS Role List. Although not exhaustive, the list below provides the most common ALMS Roles along with some of their principal activities or duties in the system:

1. Learner:
 - a) Registers for (or is registered for) Army Training,
 - b) Launches online training products,
 - c) Views own training records (Completed Training, Transcript),
 - d) Views own acquired and deficient Skills (Army Tasks),
2. Course Manager:
 - a) Serves as the Proponent's representative to the ALMS and authoritative source of Course data,
 - b) Coordinates with the ALMS Customer Service Center (CSC) to create and manage Course Catalog entries, Course structure, and associated Resource requirements,
 - c) Creates and manages Proponent Tasks and Individual Training Plan (ITP) data,
 - d) Uploads and/or manages training content (Web-Based and classroom support).
3. Registrar:
 - a) Reserves seats in scheduled offerings,
 - b) Registers learners for scheduled, self-paced, or physical offerings,
 - c) Requests on-demand events, such as public and private offerings (for courses) and meetings.

4. Class Manager (performs all Scheduler Duties above and also):
 - a) Manages Class Rosters (Adds/Drops, Waitlists, Class Sections),
 - b) Determines Course completions (if there are non-academic, administrative requirements necessary for “graduation”).

 5. Instructor:
 - a) Enters class Lesson attendance into system,
 - b) Enters individual grades for external assessments,
 - c) Marks Lessons complete (“delivered”),
 - d) Conducts Lesson-centered collaboration sessions (when applicable).

 6. Facility/Resource Manager:
 - a) Creates and manages Facility objects in the system,
 - b) Creates and manages on-hand training Equipment records.

 7. Unit Training Manager:
 - a) Functions as training supervisor for selected Learners (e.g. assigned Soldiers),
 - b) Registers by proxy assigned Learners for approved training,
 - c) Monitors assigned Learners’ training status and results,
 - d) Reviews assigned Learners’ Skills gaps and orders training to address deficiencies.

 8. Training Coordinator:
 - a) Provides oversight of training activities based on a common, defined organization,
 - b) Runs organizational-based reports from system menus,
 - c) Has read-only visibility of individual profiles and training records.

 9. Help Desk Agent: Provides three levels of system permissions to support help desk agents in assisting users and resolving problems.
 - a) Help Desk Tier 1 – access for first level ATHD agents
 - b) Help Desk Functional Content – permissions for course Proponent agents
 - c) Help Desk Technical – permissions for system technical agents
- b. The “permissions” to perform certain actions in the ALMS are based upon the user’s Role. Figure 2 provides an illustration of this. The red arrows, representing unauthorized tasks for the Role-Based User, are blocked, i.e. cannot be performed in the system.

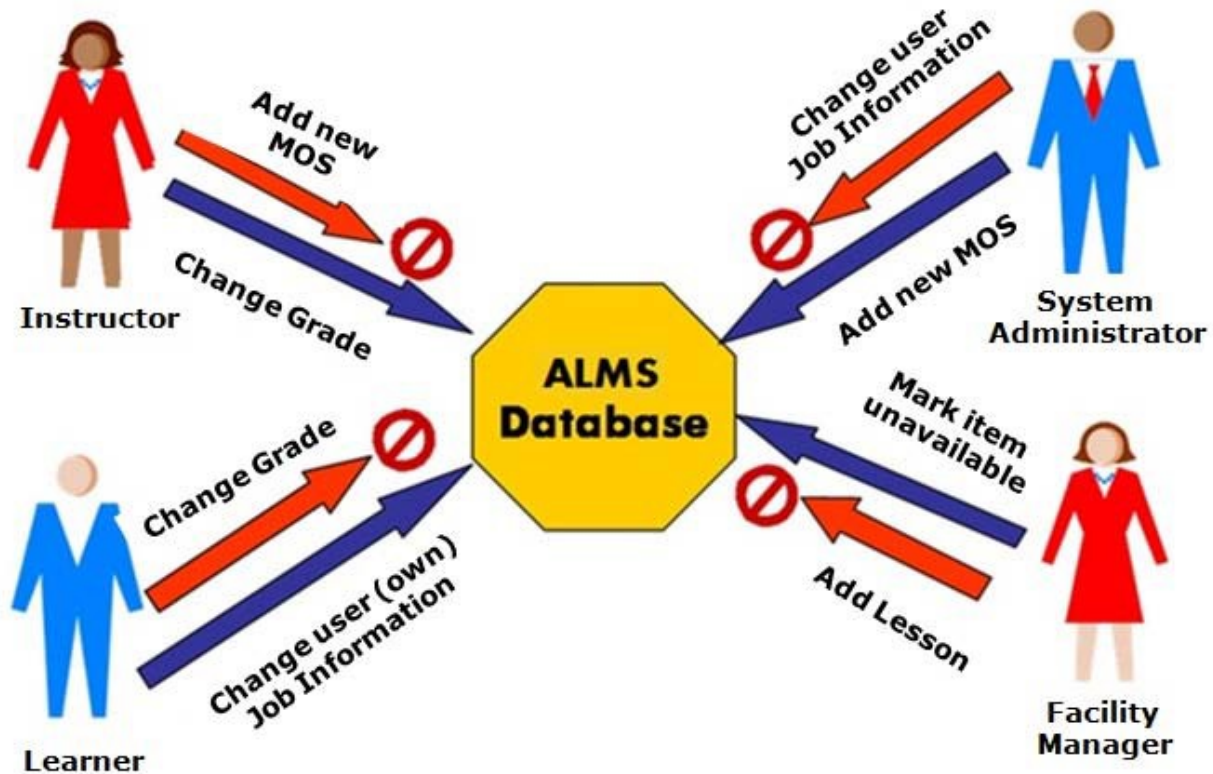


Figure 2. ALMS Permissions Examples

5. ALMS CUSTOMER SERVICE CENTER (CSC). The ALMS CSC responds to the needs of the system's trainer-users. CSC members act as proxies for Course Managers (CoM), performing those actions in the system necessary to achieve the desired operational result on the Proponents' behalf. The CSC members work directly with Course Managers by conducting training, and assisting CoM's w/ reports, roster management, and other functional tasks. The CSC members perform such activities as course and topic template creation; the creation of courses derived from those objects; the creation and manipulation of tasks, task lists, and job roles; and the associations in the system between and among all these.

Ensuring this happens without unnecessary delay or confusion requires teamwork and frequent communication between the CSC members and the Proponents supported. CSC members typically establish habitual relationships with specific Proponent representatives in order to foster this degree of cooperation and capitalize on shared knowledge of training needs established over time. The key to success is the clear communication of training intent by the Proponent representative to the CSC counterpart. This includes documentation of detailed training strategy, goals, course structure and map, student management strategy, expected outcomes, standards, policies, and other factors that may influence how the ALMS executes that training intent.

CSC contact information is at Section 8 of this document.

6. COURSEWARE HOSTING. The storage, delivery, and overall management of training content comprise one of the principal functions of the ALMS. Depending on the Proponent's intent, content can be anything from small files of text or graphics supporting a Lesson to a complete, SCORM-conformant Courseware package, containing weeks' worth of training and training support material. But for ALMS purposes, content generally refers to Courseware. Training materials that support Instructor-led Lessons are uploaded and managed in the ALMS by Proponent Course Managers as part of the Course creation process.

Regardless of the form, it is a principal responsibility of the Course Manager to ensure that the content required for administering training is entered into the ALMS and that it accurately reflects the intent of the Proponent. What actually constitutes such content is at the discretion of the Course Manager, as the Proponent's representative.

Courseware can be defined as interactively executable, electronic files in various formats that have been designed to support Web-based training. For such Courseware, there are generally two major categories- SCORM-conformant Courseware and "legacy" Courseware that currently is hosted on a variety of Army, other DoD, and commercial data storage-and-retrieval systems. Legacy Courseware may exist in several formats, some of which are compatible with the ALMS, while others reside on proprietary systems in formats that make importing into the ALMS impossible without conversion or redesign.

In addition to executable files, existing, legacy Army "Courseware" can also include content that was formerly paper-based text, but which has undergone a digitization process to render it electronically accessible to Learners. A book that has been converted to an Adobe Acrobat (.pdf) file is a common example of this. (Note that .pdf files are not executable in an interactive sense; they may be accessed from a repository, and subsequently opened and read by Learners as training material.)

All Army executable Courseware must be tested and evaluated for "playability" before being accepted into the ALMS for storage, publication in the Catalog, registration, or delivery. This includes both formally developed, SCORM conformant content, as well as legacy Courseware, but excludes Courseware that is not interactive, (e.g. simple slideware, digitized text).

At a high-level, the activities involved in fielding web-based training on the ALMS include:

- a. Developer testing of courseware on the Content Test Environment (CTE)
- b. Proponent delivery of courseware to DDL for review
- c. DDL delivery of courseware to the CSC for upload and configuration onto the ALMS
- d. Proponent conduct of Group Trials (per TRADOC Pam 350-70-10) on the ALMS
- e. Proponent test/fix cycle as needed

- f. CSC conduct of function testing
- g. Proponent review of the course configuration
- h. Proponent decision to field the course (make it available for registration)

7. SUMMARY. The ALMS plays a pivotal role in modernized Army training by enabling the functional goal of modernizing Army training through the application of IT. It shifts the training paradigm from centralized and instructor-centric to decentralized and student-focused. Understanding and using the ALMS is crucial to Army training modernization.

8. ALMS POINTS OF CONTACT. The PdM ATIS Website, <https://www.pdmatis.army.mil>, provides a variety of information about PdM ATIS and its products. The following personnel are available to assist individuals with questions or issues regarding PdM ATIS or the ALMS:

- a. Product Manager (PdM), Army Training Information System (ATIS): Timothy Hale; timothy.m.hale3.civ@army.mil; (757) 878-0433; Ext. 2900.
- b. Operations Support Division Chief, ATIS: Gina Whitaker; gina.l.whitaker2.civ@army.mil; (757) 878-0433; Ext. 2911.
- c. Manager, ALMS Customer Service Center (CSC), ALMS COR: Bobby Kirts; bobby.j.kirts.civ@army.mil; (757) 878-0433; Ext. 1320.
- d. Chief, Technical Integration Team, TRADOC Proponent Office (TPO) ATIS: Ray Shinol; jan.r.shinol2.civ@army.mil; (757) 878-7001 x 6617.
- e. Chief, Acquisition and Management Division, Directorate of Distributed Learning (DDL), Army University (ArmyU): Dr. Peggy Kenyon; peggy.l.kenyon.civ@army.mil; (757) 878-6935.
- f. Chief, Army Training Help Desk (ATHD), TPO ATIS: Charles Bos; charles.j.bos.civ@army.mil; (757) 878-2858.