Integrated Logistics Support for Defense and Aerospace Training Course

28 Dec 2026 - 01 Jan 2027

Boston

7500 € (Per Person)

Ref: #LOG5221_151620

Course Introduction / Overview:

This course provides a comprehensive exploration of Integrated Logistics Support (ILS), a critical discipline for ensuring the operational readiness, sustainability, and cost-effectiveness of complex systems in the defense and aerospace sectors. Participants will delve into the core principles and elements of ILS, understanding how to influence system design for supportability and reduce the total ownership cost. The curriculum is structured to bridge the gap between theoretical concepts and practical application, addressing the unique challenges of long-life-cycle assets and mission-critical equipment. Drawing upon foundational principles established by pioneers like Benjamin S. Blanchard in his seminal work, "Logistics Engineering and Management," this program emphasizes a holistic approach to product support. At BIG BEN Training Center, we guide participants through the intricacies of Logistics Support Analysis (LSA), performance-based logistics (PBL), and obsolescence management. This training is designed to equip professionals with the strategic foresight and technical skills needed to develop and implement robust ILS plans that guarantee system availability and mission success from acquisition to disposal.

Target Audience / This training course is suitable for:

- Logistics Managers and Planners.
- Program and Project Managers.
- Systems and Supportability Engineers.
- Supply Chain and Procurement Specialists.
- Maintenance and Reliability Professionals.
- Defense Acquisition and Contracting Officers.
- Product Support Managers.
- Military Officers and Civilian Defense Personnel.
- Aerospace Operations Staff.

Target Sectors and Industries:

- Aerospace Manufacturing and Services.
- Defense Contracting and Technology.
- National Armed Forces and Military Branches.
- Governmental Defense and Security Agencies.
- Aviation and Airline Operations.
- Satellite and Space Exploration Industries.
- Naval and Maritime System Providers.

Target Organizations Departments:

- Logistics and Supply Chain Management.
- Program Management Office (PMO).
- Systems Engineering and Design.
- Procurement and Acquisition.
- Maintenance, Repair, and Overhaul (MRO).
- Product Support and Customer Service.
- Reliability and Maintainability Engineering.
- Configuration Management.

Course Offerings:

By the end of this course, the participants will have able to:

- Analyze the core elements of Integrated Logistics Support (ILS) and their interdependencies.
- Conduct a comprehensive Logistics Support Analysis (LSA) to influence system design.
- Develop effective maintenance plans and supply support strategies for complex assets.
- Evaluate life cycle costs to optimize total ownership cost (TOC) for defense systems.
- Implement performance-based logistics (PBL) contracts and strategies.
- Manage technical data and documentation in accordance with industry standards.
- Create strategies for mitigating risks associated with component obsolescence.
- Formulate a complete Integrated Logistics Support Plan (ILSP).

Course Methodology:

The training methodology at BIG BEN Training Center is designed to foster a dynamic and interactive learning environment that maximizes knowledge retention and practical application. This course moves beyond traditional lectures, employing a blended approach that includes expert-led presentations, in-depth case studies from the defense and aerospace industries, and collaborative group workshops. Participants will engage in practical exercises that simulate real-world challenges, such as conducting a supportability analysis or developing a preliminary life cycle cost model. Interactive sessions encourage open discussion and the sharing of professional experiences, enriching the learning process for all attendees. Our instructors facilitate a continuous feedback loop, ensuring that concepts are clearly understood and can be applied directly to the participants' work environments. The focus is on building tangible skills and strategic thinking, empowering professionals to implement effective Integrated Logistics Support strategies within their organizations immediately upon completion of the course.

Course Agenda (Course Units):

Unit One: Fundamentals of Integrated Logistics Support (ILS)

- Introduction to ILS in Defense and Aerospace.
- The History and Evolution of Logistics Support.
- The Twelve Core Elements of ILS.
- The Role of ILS in the System Acquisition Life Cycle.
- Understanding Total Ownership Cost (TOC) and Life Cycle Cost (LCC).
- Key Performance Indicators (KPIs) for Logistics Support.
- The Relationship Between ILS and Systems Engineering.

Unit Two: Supportability Engineering and Analysis

- Introduction to Supportability Engineering.
- Reliability, Availability, and Maintainability (RAM) Principles.
- Conducting a Logistics Support Analysis (LSA) per MIL-STD-1388.
- Failure Modes, Effects, and Criticality Analysis (FMECA).
- Level of Repair Analysis (LORA).
- Maintenance Task Analysis (MTA).
- Developing the Logistics Support Analysis Record (LSAR).

Unit Three: Managing the ILS Elements

- Supply Support and Spares Provisioning Strategies.
- Support and Test Equipment Planning.
- Manpower and Personnel Integration (MPI).
- Training and Training Support Development.
- Technical Data and Documentation Management.
- Packaging, Handling, Storage, and Transportation (PHS&T).
- Facilities and Infrastructure Planning.

Unit Four: Advanced Logistics and Contractual Strategies

- Performance-Based Logistics (PBL) Concepts and Implementation.
- Contracting for Support in the Defense Sector.
- Obsolescence and Diminishing Manufacturing Sources (DMSMS) Management.
- Configuration Management in a Support Environment.
- The Role of Computer Resources in Modern Logistics.
- Supply Chain Resilience and Risk Management.
- Integrating ILS with Program Management.

Unit Five: ILS Plan Development and Future Trends

- Developing and Implementing an Integrated Logistics Support Plan (ILSP).
- Tailoring ILS for Different Program Scales and Complexities.
- The Impact of Digitalization on Logistics Support.
- Predictive Maintenance and Condition-Based Monitoring.
- The Role of Artificial Intelligence in Supply Chain Optimization.
- Case Study Workshop: Building an ILS Strategy from Scratch.
- Course Review and Final Q&A Session.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As defense systems become increasingly reliant on software and AI, how must the traditional elements of Integrated Logistics Support evolve to ensure cyber resilience and continuous capability enhancement throughout the system's life cycle?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by offering a deeply specialized and integrated perspective tailored specifically for the high-stakes environments of defense and aerospace. Unlike general logistics courses, our curriculum is built around the unique challenges inherent in these sectors, such as decade-long system life cycles, stringent regulatory compliance, and the non-negotiable demand for operational readiness. We move beyond a siloed examination of individual logistics elements, focusing instead on their complex interplay and the critical role of supportability engineering from the earliest stages of system design. The program emphasizes the strategic and financial implications of logistics, teaching participants not just how to manage support, but how to optimize it to reduce total ownership cost through advanced methodologies like life cycle costing and performance-based logistics. By blending foundational theory with practical case studies drawn directly from major defense and aerospace programs, the course provides actionable insights and frameworks that professionals can apply immediately to enhance mission success and deliver tangible value to their organizations.