



**TRAINING ON
INTEGRATED PRODUCT SUPPORT
(IPS)**



INTEGRATED PRODUCT SUPPORT (IPS)

Why Choose QVISE for your ILS Trainings?

- ✓ QVISE offers ILS / IPS trainings designed to empower professionals for enhancing product Supportability and sustainment.
- ✓ Our collaboration with international partners to benefit from a diverse range of industry scenarios and best practices in ILS / IPS.
- ✓ Interact with instructors with well-regarded training experience, potentially including those who have delivered training to prestigious organizations.
- ✓ By choosing us, you gain the tools and expertise to improve supportability, reduce overall product life cycle cost and enhance product availability.

Pre-Requisites

- Minimum 3 years of industry experience (Preferably Maintenance Oriented)
- Bachelor's degree in electrical / Electronics / Mechanical / Mechatronics Engineering
- Integrated Logistics Support Basics
- Understanding of electronic equipment and components – for Electronics Engineers
- Knowledge of common mechanical equipment & components – for Mechanical Engineers
- Possess strong analytical skills

INTEGRATED PRODUCT SUPPORT (IPS)



TESTIMONIALS

“The course content was incredibly relevant to my daily work. The tailored approach allowed me to directly apply the learned concepts to my current projects.”

– IPS Team Member (Module – 2)

“Their deep knowledge of the subject matter was evident in their clear and engaging delivery. I felt encouraged to participate and ask questions, which greatly enhanced my learning experience. The practical and scenario-oriented examples brought the training to life and made the concepts easier to grasp.”

– In-Service Team Member (Module – 3)

“The comprehensive coverage of LORA principles and methodologies has provided me with the tools to optimize maintenance strategies and make informed decisions in my role as an IPS specialist.”

– IPS Team Member (Module – 6)

INTEGRATED PRODUCT SUPPORT (IPS)



ILS / IPS Course Program Details

- ❑ QVISE offers a comprehensive ILS / IPS certification program designed to equip professionals with the knowledge and skills necessary for effective product life cycle management.
- ❑ The program is structured into **nine (9)** distinct modules designed to provide a solid foundation in ILS / IPS.
- ❑ Our curriculum is carefully designed to align with Military standards and best practices, ensuring that participants gain a deep understanding of ILS / IPS principles, processes, and implementation techniques.
- ❑ Upon successful completion of the program, learners will demonstrate a basic level expertise of ILS / IPS concepts & strategies.

Course Module Distribution

- ✓ **Module 1:** Introduction to ILS / IPS, Reliability and Supportability Engineering
- ✓ **Module 2:** Product Support Analysis (PSA) Insight
- ✓ **Module 3:** Life Cycle Costing (LCC), Availability and Maintainability Analysis
- ✓ **Module 4:** Logistics Product Data (LPD)
- ✓ **Module 5:** Synergizing Maintenance Strategies
- ✓ **Module 6:** Level Of Repair Analysis (LORA), Producibility and Supportability Assessment
- ✓ **Module 7:** Supply Support, Provision & Obsolescence Management
- ✓ **Module 8:** Packaging, Handling, Storage & Transport (PHS&T)
- ✓ **Module 9:** ILS / IPS Contact Management



MODULE 1 INTRODUCTION TO ILS / IPS, RELIABILITY & SUPPORTABILITY ENGINEERING

OBJECTIVES

- ✓ Acquire a comprehensive understanding of IPS elements, their purpose, benefits, and applications
- ✓ Identify key IPS deliverables across the acquisition life cycle phases
- ✓ Develop awareness of PSA (Product Support Analysis), LPD (Logistics Product Data) and grasp the fundamentals of ILS Plan (ILSP) development
- ✓ Understand the fundamental concepts and principles of Reliability Engineering
- ✓ Identify key tasks and activities associated with Reliability program
- ✓ Understand the integration and processes of ILS / IPS and Reliability within the system life cycle phases

Course Outline – 5 Days

1. Introduction to Reliability Engineering
 - a) Brief History
 - b) What is Reliability Engineering
 - c) Overview of Reliability Program Tasks as per MIL-STD-785B
2. Reliability Modeling
 - a) Functional Block Diagram (FBD)
 - b) Reliability Block Diagram (RBD)
3. Reliability Prediction
 - a) Parts Stress Analysis
 - b) Live Demo on FALCON software
4. Mean Time Between Failure (MTBF) Calculation Techniques
 - a) In-Service MTBF Calculation



MODULE 1 INTRODUCTION TO ILS / IPS, RELIABILITY & SUPPORTABILITY ENGINEERING

Course Outline

5. Introduction to ILS / IPS
 - a) History and transition from ILS to IPS
 - b) Elements of IPS
6. PSA (Product Support Analysis)
 - a) Transition from LSA to PSA
 - b) PSA Process in different Life cycle Phases
 - c) PSA Tailoring + Live Demo on FALCON
7. FMECA (Failure Modes, Effects & Criticality Analysis)
 - a) Qualitative FMECA
 - b) Quantitative FMECA
 - c) Live Demo on FALCON
8. RCM (Reliability Centered Maintenance)
 - a) RCM as Failure Management Process
 - b) RCM Decision Logic Tree + Workshop

Course Outline

9. Condition Based Maintenance (CBM)
 - a) CBM & CBM +
 - b) CBM Techniques
 - c) CBM + and US DoD Acquisition Life cycle
10. FRACAS (Failure Reporting, Analysis & Corrective Action System)
 - a) FRACAS Concept
 - b) FRACAS Process
 - c) FRACAS vs FMEA / FMECA
 - d) Workshop
 - e) Live Demo on FALCON
11. MTA (Maintenance Task Analysis)
 - a) MTA as Activity 12 of PSA
 - b) Live Demo on FALCON



MODULE 1 INTRODUCTION TO ILS / IPS, RELIABILITY & SUPPORTABILITY ENGINEERING

Course Outline

12. LORA (Level Of Repair Analysis)
 - a) LORA Process
 - b) Factors Affecting LORA
13. Availability
 - a) Achieved & Inherent Availability
 - b) Operational Availability
 - c) Workshop + Activity
14. LCCA (Life Cycle Cost Analysis)
 - a) Costing Categories
 - b) Life Cycle Cost Methods
 - c) Live Demo on FALCON
15. IETM (Interactive Electronic Technical Manual)
 - a) Management, Authoring and Publishing using live demo on FALCON

Course Outline

16. Obsolescence Management (OM)
 - a) Analysis & Assessment
 - b) Mitigation & Resolution
17. CM (Configuration Management)
 - a) CM Functions
 - b) Configuration Change Management
 - c) Live Demo of FALCON for CM
18. LSAR / LPD (Logistics Support Analysis Record / Logistics Product Data)
 - a) LPD Entities in Life Cycle Phases
 - b) Important LPD DEDs in LPD
 - c) Live Demo on FALCON
19. Spare Support
 - a) Spare Allowance Computation



MODULE 1 INTRODUCTION TO ILS / IPS, RELIABILITY & SUPPORTABILITY ENGINEERING

Course Outline

- 19. Spare Support
 - b) Spare Optimization & Procurement Decisions
 - c) Live Demo on FALCON
- 20. MRO (Maintenance Repair Overhaul) and Shopfloor Management
 - a) Maintenance Planning
 - b) Maintenance Data Collection
 - c) Tools & Techniques for Maintenance Management
 - d) Live Demo on FALCON



MODULE 2 PRODUCT SUPPORT ANALYSIS (PSA) INSIGHT

OBJECTIVES

- ✓ Comparison of Product Support Analysis (MIL-HDBK-502A, TA-STD-0017) with Logistics Support Analysis (MIL-STD-1388-1A) & its transition
- ✓ Acquire knowledge on Product Support Strategy and PSA reviews
- ✓ Learn how to develop PSA Plan and Support Plan
- ✓ Understand how to analyze cost, readiness and supportability drivers and formulate supportability objectives
- ✓ Understand PSA outcomes, how to conduct trade-off analyses, and assess supportability risk
- ✓ Master development PSA activity flows, identifying responsible parties and aligning deliverables
- ✓ Tailor PSA program and process to align with specific program requirements

Course Outline – 5 Days

1. LSA and PSA comparison and transition
2. PSA Activities & sub-activities
 - a) Activity flow in Life cycle Phases
 - b) Activity 1 to 5 (+ Workshop)
 - c) Identify Cost Drivers
 - d) Analyze Risk for each activity
 - e) Activity 6 to 9 (+ Workshop)
 - f) Develop Support Plan
 - g) Activity 10 to 12 (+ Workshop)
 - h) Activity 13 to 17
3. PSA Activities in a Product life cycle flow with Responsibilities as Government & Contractor
4. Tailoring of PSA Activities
 - a) Tailoring Factors & Considerations
 - b) Tailoring Case Study + Workshop



MODULE 3 LIFE CYCLE COSTING (LCC) AND A&M ANALYSIS

OBJECTIVES

- ✓ Understand the concept of life cycle costing, its objectives, and cost estimation categories
- ✓ Learn various life cycle costing methods & models for decision-making
- ✓ Understand a simple life cycle cost model for comprehensive cost analysis
- ✓ Analyze the impact of mission profiles, cost-benefit trade-offs, and delays on operational availability (A_0)
- ✓ Understand the concept of Administrative and Logistics Delay Time (ALDT) and its impact on A_0
- ✓ Grasp the significance of maintainability in complex systems and impact on system performance
- ✓ Learn how to apply Maintainability prediction using MIL-HDBK-472 Notice 1 Procedure V, conduct maintainability reviews to identify and address potential issues
- ✓ Understand the role of Testability in Maintainability including its metrics and relation with FMEA

Course Outline – 5 Days

1. Introduction to Life cycle Costing
 - a) Costing Overview and Categories
 - i. Life Cycle Cost (LCC)
 - ii. Total Ownership Cost (TOC)
 - iii. Whole Life Cost (WLC)
 - b) Life cycle Cost Objective and Needs
 - c) Life cycle Cost Estimate scoping
 - d) Life cycle Costing Methods
 - e) Life cycle Costing Models
 - f) Types of Cost Estimation
 - g) Limitations of Life cycle Costing
2. Life cycle Cost Analysis
 - a) Life cycle cost Element Structure
 - b) Escalation / Inflation and Discount Factor (+ workshop)



MODULE 3 LIFE CYCLE COSTING (LCC) AND A&M ANALYSIS

Course Outline

3. Life cycle Cost (LCC) Model
 - a) LCC Model Objectives
 - b) Sample LCC Model
 - c) LCC Inputs, schedules, algorithms & outputs
 - d) Examples & Numericals
4. Maintainability Engineering
 - a) Objectives
 - b) Maintainability Concepts and Responsibilities
 - c) Maintainability Standards & key tasks
5. Maintainability Prediction + workshop
 - a) Maintainability Prediction & its application
6. Maintainability Reviews
 - a) Reviews & Tradeoff Techniques

Course Outline

7. Factors Affecting Maintainability
8. Maintenance Classification, Process and Categories
9. Testability Engineering + workshop
 - a) Important Terms & Definitions
 - b) BIT, BITE and ATE
 - c) Testability Requirements
 - d) Fault Detection
 - e) Fault Isolation
 - f) Ambiguity Group
 - g) False Alarm Rate
10. Overview of Availability and Readiness
 - a) Elements of Availability
 - b) Availability Prediction
11. Operational Availability Objectives
 - a) Analysis rationale and checklist



MODULE 3 LIFE CYCLE COSTING (LCC) AND A&M ANALYSIS

Course Outline

11. Operational Availability, Mission Profile and Cost Benefits Tradeoff
 - a) Mission Profile + workshop
 - b) A_0 Cost benefit Tradeoff analysis
12. Effects on A_0
 - a) Administrative and Logistics Delay Time (ALDT) + workshop
 - b) Numericals and Activity
 - c) Operational Effectiveness and its Factors
 - d) Steady State, Instantaneous Operational Availability and Markov Principle



MODULE 4 LOGISTICS PRODUCT DATA (LPD)

OBJECTIVES

- ✓ Understand the use and application of LPD Standards including the past MIL-STD-1388-2B and the new standards SAE GEIA-STD-0007-B, SAE TA-HB-0007-1 & SAE GEIA-HB-0007
- ✓ Effective utilization of LPD data elements to make informed decisions about when and how to use them
- ✓ Tailor LPD implementation to suit the specific needs of the customer, ensuring relevance and efficiency
- ✓ Learn how to apply and develop LPD data effectively to streamline maintenance, repair, and support processes as part of IPS package development
- ✓ Enables to develop the basic Product Support Package as an outcome of all the PSA activities

Course Outline – 5 Days

1. LSAR & LPD Comparison and Transition
 - a) LSAR & LPD Overview.
 - b) LSAR and LPD Comparison and handbooks
2. LPD Data Entities
 - a) List of LPD Entities and their relationship with PSA Activities in Life cycle Phases
3. Entities X: Cross functional Requirements
 - a) LCN (LSA Control Number)
 - b) Types of LCN Assignment
 - i. Classical
 - ii. Modified Classical
 - iii. Sequential
 - c) LCN Structure & LCN Indenture
 - d) ALC (Alternate LCN)
 - e) LCN Type



MODULE 4 LOGISTICS PRODUCT DATA (LPD)

Course Outline

3. Entities X: Cross functional Table
 - f) System / End Item Identifier
 - g) Usable on Code (UOC)
 - h) LCN to System / End Item UOC mapping
 - i) LCN to Serial Number UOC mapping
 - j) CAGE (Commercial & Government Entity)
 - k) Document IDs and Technical Manual code
4. Entities A: Operation and maintenance requirement
 - a) Wartime vs Peacetime
 - b) Mission Profile
 - c) Annual Operating Requirements
 - d) Technical VS Operational Failure
 - e) RAM Requirements

Course Outline

5. Entities B: RAM, FMECA and Maintainability analysis
 - a) BIT (Built-In Test) and its characteristics
 - b) Ambiguity Groups
 - c) RAM Characteristics Measured VS Predicted VS Allocated VS Comparative
 - d) FMECA
 - e) Failure Mode Ratio (α)
 - f) EFM-MTBF (Engineering Failure Mode - Mean Time Between Failure)
 - g) Failure Effect Probability (β)
 - h) SHSC (Safety Hazard Severity Code)
 - i) Failure Mode & RAM Item Criticality Number
 - j) RCM



MODULE 4 LOGISTICS PRODUCT DATA (LPD)

Course Outline

6. Entities G: Personnel skill considerations
 - a) SSC (Skill Specialty Code)
7. Entities F: Facility considerations
 - a) Facility Category Code
8. Entities E: Support equipment and training material requirements
 - a) SE ICC (Support Equipment Item Category Code)
 - b) SERD (Support Equipment Recommendation Data)
9. Entities U: Unit under test requirements and justification
 - a) UUT (Unit Under Test)
 - b) CMRS (Calibration Measurement Requirement Summary)
 - c) OTP (Operational Test Program) Data

Course Outline

10. Entities J: Transportability engineering analysis
 - a) Transportation Indicator
 - b) Shipping Modes
11. Entities H: Packaging and provisioning requirement
 - a) NSN (NATO Stock Number)
 - b) Shelf Life & Action Code
 - d) Packaging Code
 - e) PLISN (Provisioning List Item Sequence Number)
 - f) Essentiality Code
 - g) SMR (Source, Maintenance & Recoverability)
 - h) ICC (Item Category Code)
 - i) MRR (Maintenance Replacement Rate)



MODULE 4 LOGISTICS PRODUCT DATA (LPD)

Course Outline

11. Entities H: Packaging and provisioning requirement
 - j) Provisioning Serial Number UOC Mapping
 - k) Provisioning System / End Item UOC Mapping
 - l) Provisioning Design Change Data
12. Entities C: Task inventory, task analysis, personnel and support requirements
 - a) Task Code
 - b) Task Frequency
 - c) Element Indicator
 - d) Task / Subtask SE and Provisioned Item
13. LSAR Reports
 - a) LSAR Report Analysis
 - b) Relationship with IPS Elements
 - c) LSAR Reports Description (LSA-001)
14. Other LSAR reports Overview



MODULE 5 SYNERGIZING MAINTENANCE STRATEGIES

OBJECTIVES

- ✓ Understand the evolution of maintenance practices and fundamental maintenance concepts.
- ✓ Differentiate between various maintenance approaches and their applications.
- ✓ Understand core principles of FMECA to identify potential failures and their impacts.
- ✓ Apply Reliability Centered Maintenance (RCM) methodology to develop effective maintenance strategies.
- ✓ Utilize various CBM & CBM+ technologies for fault detection and diagnosis.
- ✓ Learn to perform Maintenance Task Analysis.
- ✓ Understand the role of MRO in ensuring equipment reliability and safety.
- ✓ Understand the MRO activity workflow, including work order management and safety protocols.

Course Outline – 5 Days

1. Evolution of Maintenance
 - a) What is Maintenance?
 - b) Maintenance Functions
2. Maintenance Concept and levels
 - a) In Commercial Industries
 - b) In Defense / Military
3. Maintenance Philosophy
4. Maintenance Strategy
5. Maintenance Plan
6. Types of Maintenances
 - a) Proactive
 - i. Scheduled
 - ii. Condition-Based
 - iii. Prognostics / Predictive



MODULE 5 SYNERGIZING MAINTENANCE STRATEGIES

Course Outline

6. Types of Maintenances
 - b) Reactive
 - i. Corrective / Unplanned
7. Failure Modes and Effects Analysis (FMEA) & Failure Modes, Effects & Criticality Analysis (FMECA)
 - a) Inputs of FMECA
 - b) Qualitative FMECA
 - i. Severity, Occurrence & Detectability
 - ii. Risk Priority Number (RPN)
 - c) Quantitative FMECA
 - i. Failure Mode Ratio (α)
 - ii. Failure Effect Probability (β)
 - d) Outputs of FMECA

Course Outline

8. Reliability Centered Maintenance (RCM)
 - a) RCM Analysis (RCMA)
 - b) RCM Process
 - c) Principles
9. RCM Decision Logic & Task Evaluation
 - a) Servicing Task
 - b) Lubrication Task
 - c) On Condition Task
 - d) Potential Failure (PF) Curve
 - e) Hard Time Task
 - f) Failure Finding Task
 - g) No PM – Run To Failure Task
 - h) Other Actions
 - i) Age Exploration & Plan



MODULE 5 SYNERGIZING MAINTENANCE STRATEGIES

Course Outline

10. RCM Task Selection
 - a) Special Considerations
 - b) Prognostics Health Monitoring (PHM)
11. RCM Detailed Process as per NAVAIR 00-25-403
 - a) Case Studies
 - b) Workshop
12. Condition Based Maintenance CBM
 - a) Goals, Advantages & Disadvantages
 - b) Monitoring Techniques
13. CBM +
 - a) Evolution
 - b) Design and Process
 - c) Objectives & Metrics
 - d) Business and Technical Needs
 - e) CBM+ Acquisition Lifecycle

Course Outline

14. Maintenance Task Analysis (MTA)
 - a) Requirements
 - b) MTA & PSA (Product Support Analysis) Coordination
 - c) Overview of Activity 12 / Task 401 of PSA / LSA
 - d) MTA template and developing Task Analysis data
 - e) Workshop
15. FRACAS (Failure Reporting, Analysis & Corrective Action System)
 - a) FRACAS Concept
 - b) FRACAS Process
 - c) FRACAS vs FMEA / FMECA
 - d) Case Study + Workshop



MODULE 5 SYNERGIZING MAINTENANCE STRATEGIES

Course Outline

15. Maintenance Planning
 - a) Objective
 - b) (MAC) Maintenance Allocation Chart
 - c) LSAR Reports for Maintenance Planning
16. MRO (Maintenance Repair Overhaul) Facility
 - a) Evolution
 - b) MRO in Military
17. MRO and Shopfloor Management
 - a) MRO & FRACAS
 - b) Work Order
 - c) Job Card
 - d) Automated Tools



MODULE 6 LEVEL OF REPAIR ANALYSIS (LORA), PRODUCIBILITY AND SUPPORTABILITY ASSESSMENT

OBJECTIVES

- ✓ Understand LORA process and its management
- ✓ Learn to apply decision-making logic to LORA, considering project constraints, Economic LORA through an analytical model & calculate most cost-effective maintenance strategy.
- ✓ Analyze LORA workflows and identify non-economic factors influencing repair decisions.
- ✓ Perform sensitivity analyses to evaluate LORA outcomes under varying conditions.
- ✓ Understand concept of supportability and its role in product life cycle management.
- ✓ Distinguish between government and contractor supportability responsibilities.
- ✓ Conduct supportability analyses, including functional and physical assessments.

Course Outline – 5 Days

1. Introduction to LORA
 - a) Overview & Purpose
 - b) Types of LORA Evaluation
 - i. Economic LORA
 - ii. Non-Economic LORA
 - c) LORA Program
2. LORA Program & Process as per SAE AS 1390
 - a) Activity 1 – Program Strategy
 - b) Activity 2 – Program Planning
 - c) Activity 3 – Program Reviews
 - d) Activity 4 – Input Data Compilation
 - e) Activity 5 – Evaluation Performance, Assessment & Documentation
 - f) Activity 6 – Using Results
3. LORA Decision Logic



MODULE 6 LEVEL OF REPAIR ANALYSIS (LORA), PRODUCIBILITY AND SUPPORTABILITY ASSESSMENT

Course Outline

4. LORA Tailoring
5. LORA Analysis
 - a) Non-Economic LORA
 - b) Questions regarding Non-Economic LORA
6. Types of Economic LORA Model
7. NAVSEA Economic LORA Model
 - a) Cost Threshold
 - b) System and Item Variables
 - c) Pre-requisite Calculations
 - d) Spares pipeline expansion
 - e) Base & Repair Calculation
 - f) Additional Support Resource calculation

Course Outline

8. Sensitivity Evaluation
 - a) Overview & Explanation
 - b) Logic and Examples
9. Producibility
 - a) Tools & Techniques
10. Establishing Producibility Infrastructure
 - a) Organize for Producibility
 - b) Risk Management
 - c) Employ Producibility Design Guidelines
11. Producibility during Conceptual & Detailed Design Phases
12. Producibility Case Study + Workshop
13. Supportability Assessment
14. Supportability Engineering Process
 - a) Government & Contractor Process



MODULE 6 LEVEL OF REPAIR ANALYSIS (LORA), PRODUCIBILITY AND SUPPORTABILITY ASSESSMENT

Course Outline

15. Design Supportability Characteristics
 - a) Formal & Informal Assessment
 - b) Government & Contractor Assessment
 - c) Supportability Demonstration
16. Support Resource
17. Support Infrastructure
18. Supportability Objectives & Metrics + Workshop
 - a) Fault Detection Ratio (FDR)
 - b) Fault Isolation Rate (FIR)
 - c) False Alarm Rate (FAR)
 - d) Maintenance Burden
 - e) Materiel Availability (A_M)
 - f) Repair Cycle Time (RCT)
 - g) Personnel Requirements



MODULE 7 SUPPLY SUPPORT, PROVISIONING & OBSOLESCENCE MANAGEMENT

OBJECTIVES

- ✓ Understand the fundamentals of supply support and provisioning, including their role in product support.
- ✓ Develop provisioning strategies and technical documentation, including provisioning codes
- ✓ Analyze spare part requirements using various forecasting models and techniques.
- ✓ Utilize the FLSIP model for spare part forecasting and optimization.
- ✓ Apply statistical methods (e.g., Poisson distribution) for spare part demand analysis.
- ✓ Implement effective obsolescence management strategies to mitigate risks and ensure product support continuity.
- ✓ Analyze the impact of obsolescence on product support and develop mitigation plans.

Course Outline – 5 Days

1. Supply Support
 - a) Overview & Introduction
 - b) What is Provisioning?
 - c) Need for Provisioning
 - d) Objectives of Provisioning
2. Provisioning Process
3. Provisioning Codes + Workshop
 - a) Reference Number (Part #)
 - b) NATO Stock Number (NSN)
 - c) Part Military Essentiality Code (PMEC)
 - d) Shelf Life
 - e) Source, Maintenance & Recoverability (SMR) Code
 - i. SMR Format
 - ii. Explanation & usage of SMR Codes



MODULE 7 SUPPLY SUPPORT, PROVISIONING & OBSOLESCENCE MANAGEMENT

Course Outline

3. Provisioning Codes + Workshop
 - a) Allowance Parts List (APL)
 - b) Maintenance Replacement Rate (MRR)
 - c) Minimum Replacement Unit (MRU)
 - d) Provisioning List Item Sequence Number (PLISN)
 - e) Provisioning Contract Control Number (PCCN)
 - f) Production Lead Time (PLT)
 - g) Recommended minimum stock level
4. Provisioning Technical Document (PTD)
5. Engineering Data for Provisioning
6. Provisioning Screening and Submittal
7. Provisioning reports from LSAR

Course Outline

8. Spare Forecasting / Spare Support
 - a) Need for Spare Forecasting
 - b) Spare Forecasting
 - c) Spare Forecasting Techniques
9. Qualitative Approach
10. Quantitative Approach
 - a) Sparring to Availability Model
 - b) Readiness Based Sparring (RBS) Approach
 - c) Vari-METRIC Approach
11. FLSIP (Fleet Logistics Support Improvement Program) Model
 - a) Overview & Types of FLSIP
 - b) Case Study
 - c) FLSIP .5Plus & FLSIP .25
 - d) Workshop



MODULE 7 SUPPLY SUPPORT, PROVISIONING & OBSOLESCENCE MANAGEMENT

Course Outline

- 12. Poisson Distribution
 - a) Overview
 - b) Case Study
 - c) Workshop
- 13. Warehouse & Stocking
 - a) Overview
 - b) Management Function
- 14. Obsolescence
 - a) Reasons of Obsolescence
 - b) Types of Obsolescence
 - c) Product & Parts affected by Obsolescence
- 15. Obsolescence Management (OM)
 - a) Categorization of OM approaches
 - b) Reactive & Proactive Obsolescence Management

Course Outline

- 16. Proactive Obsolescence Management
 - a) Initial Obsolescence risk analysis
 - b) Product Obsolescence and aftersales
- 17. Strategic Obsolescence Management (OM)
 - a) Project Management principles in OM
 - b) Initiation Stage
 - c) Planning & Design Stage
 - d) Execution Stage
 - e) Monitoring and controlling stage
- 18. Forecasting Obsolescence
- 19. Obsolescence Risk Assessment Process
 - a) Case Study
 - b) Workshop



MODULE 8 PACKAGING, HANDLING, STORAGE & TRANSPORT (PHS&T)

OBJECTIVES

- ✓ Understand the concept and fundamentals of Packaging, Handling Storage & Transport (PHS&T) including their role in product support
- ✓ Learn the important information of relevant standards and technical pamphlets (TPAMs) relating for PHS&T
- ✓ Master the Military Packaging rationale along with LSAR/LPD codes on methods of preservation, cleaning, and drying procedures along with the use of cushioning and dunnage (MIL-STD-2073-1E/4)
- ✓ Learn the proper handling & storage methods for various military items to ensure their safety and integrity during storage, transport, and operational use
- ✓ Learn the methods of better deployment and transportation for a product / system and its sectionalized item(s) (MIL-STD-1366E)

Course Outline – 3 Days

1. Packaging, Handling, Storage & Transport (PHS&T)
 - a) PHS&T as IPS elements
 - b) Overview & Introduction
 - c) Definition & Description
2. PHS&T Program management as per MIL-STD-1367
 - a) PHS&T Management Procedure
 - b) PHS&T Program Implementation
 - c) PHS&T Tailoring
3. Military Packaging as per MIL-STD-2073-1E/4
 - a) Method of Preservation
 - b) Cleaning & Drying Procedure
 - c) Preservative Material
 - d) Cushioning & Dunnage



MODULE 8 PACKAGING, HANDLING, STORAGE & TRANSPORT (PHS&T)

Course Outline

3. Packaging, Handling, Storage & Transport (PHS&T)
 - e) Cushioning Thickness
 - f) Unit Container
4. Other Packaging Codes
5. Military Handling
 - a) Types of Handling
 - b) Military Handling Items
 - c) Handling Techniques based on Environment
6. Military Storage
 - a) Types of Military Storage
 - b) Storage Procedures
 - c) Storage Techniques
 - d) Storage Security

Course Outline

7. Transportability
 - a) Modes of Transport & their Limitations
 - b) Transportability Approval
 - c) Transportability Testing
 - d) Dos and Don'ts in Transportability
 - e) Lessons Learned

MODULE 9 ILS / IPS CONTRACTING MANAGEMENT



OBJECTIVES

- ✓ Understand the critical role of contracts for ensuring the required level of product support
- ✓ Understand the basics of contracting relating to ILS / IPS and how to manage ILS / IPS contracts and their complexities
- ✓ Navigate the complexities of ILS / IPS contracting processes, including pre-award activities, oversight, and reporting for ILS / IPS and LSA tasks / PSA activities
- ✓ Learn the insights on an ILS/ IPS contract and handling it based on different cases

Course Outline – 2 Days

1. Introduction to Contract
 - a) Types of Contracts
 - b) Sections in a Contract
 - i. Product Specification
 - ii. SOW (Statement of Work)
 - iii. Data List
 - iv. Terms & Conditions
 - c) Relevant Government / Customer Documents
2. The Contracting Process
 - a) Contracting for ILS / IPS
 - b) Sample Contract Format
3. Proposal Preparation & Pricing
4. Contract Management Issues & Risk Management