

3-Day Hands-On <u>iNARTE®</u> Space & Defense Certified ESD Program Monitor™



VIRTUAL or OnSite



This course was designed and developed by RMV (the Originator of 2021 NASA HQ Award Winning Hands-On ESD Training) for NASA civil servants and support contractors who support the NASA ESD Program Manager.

Multiple sessions over 3 days will include videos, live demos and experiments in the RMV Lab for interactive engagement. Learn how to verify Class A, Class B, Class C, Class D and Do No Harm R&D safe workstations. Packaging, Handling, Long Term Storage, Transport, Kitting, Return Repairs of ESD Sensitive Equipment (e.g. Optics, UAVs) that protect ESD Sensitive Devices (ESDS) will be discussed with videos and onsite demos, how to conduct periodic verification measurements and corrective actions to remedy non-compliant materials, packaging, or products in the ESD Protective Area (EPA). ESD procedures for compliance will be discussed plus demos in support of NASA, MIL STD 87893, related MIL STDs and ANS/ESD S20.20 for Low RH requirements, including surface resistance materials and flooring verification, Resistance to a Groundable Point for ESD workstations, wrist straps, ionization verification, grounding, garments, gloves, soldering irons, footwear and seating.

This VIRTUAL Hands-On class is intended for Space & Defense, Warfighters, civil servants and contractors. Traceability to NASA-8739.6B-Section 7 for extreme environments and related standards (ANSI/ESD S20.20, MIL-STDs.) is covered throughout the 3-day course, with Hands-On Instrument training and remote exam for iNARTE® Certification. Training materials are provided through RMV licensed and "whitelisted" software portal. Digital Certification is provided by Exemplar Global, the 3rd party accreditation body and member of American Society of Quality (ASQ) family of companies.

Contact Renee at 650-964-4792 for government and corporate discount rates for groups of more than 6. Discounts for Active Military and Veterans.

What You Will Learn

Class 0 (0A, 0B & 0Z)
Ultra-Sensitive ESD Sensitive
Devices for ESD Workstations per
NASA STD 8739.6B, Section 7,
ANSI/ESD S20.20, MIL STD. 87893 &
related MIL STDs. for Extreme
Environments

Incoming Inspection to Verify Material Compliance of ESD Susceptible Devices - Your First Line of Defense!

> Identification & Mitigation of Non-Conforming Materials, Packaging & Garments

Verification of Equipment & Materials in the ESD Protected Area (EPA)

How to Prepare for Customer
And Internal Audits!

Small Classes for Individual Learning (6 persons minimum) Payment in Advance

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Packaging Protection for Hostile Shipping Environments

Transport Designs to Consider
Outside the ESD Protective Area (EPA)



iNARTE® Space & Defense Certified ESD Program Monitor™



A. COURSE CONTENT

1. Verification of Static Safe Workstation Measurements

- a. Fixed movable and portable Workstations
- b. Work Surfaces Resistance
- c. Conduct Surface Voltage Tests for Charge Board Effect (CBE)
- d. Signs
- e. Serialization
- f. Antistatic treatments
- g. Gloves
- h. Ionization
- i. Seating Requirements
- j. Monitoring
- k. Soldering Irons

2. Personnel Grounding and Facility Requirements

- a. Body Voltage
- b. Wriststrap Grounding
- c. Footwear Grounding
- d. ESD Garments with Ground Snaps
- e. BUS Bar Grounding Measurements
- f. Electrical Outlet Verification
- g. Worksurface Verification
- h. Static Control Flooring

3. Packaging & Labeling Requirements

- a. ESD Materials per ANSI/ESD S541
- b. MIL-STD-2073 and MIL-STD-129
- c. Non ESD packaging
- d. Packaging ESD Sensitive items
- e. Packaging Non-Sensitive ESD items
- f. Labeling & marking
- g. Specific Applications

4. Normal Operations & Testing Requirements

- a. Individual Daily Self Check Procedures
- b. Weekly testing Requirements
- 5. ESD Program Monitor Responsibilities
- 6. ESD Materials Qualification List of Requirements
- 7. Conducting Compliance or Periodic Verification of the EPA
- **B. VIDEO FEED AND INTERACTIVE PHASE**

C. HANDS-ON INSTRUMENT EXAM AND WRITTEN EXAM

Class Participation & Hands On: 25% of Exam iNARTE® Remote 75% of Exam

ESD TRACEABILITY TO NASA, MIL. STD. AND ANSI/ESD FOR LOW RH AND HARSH ENVIRONMENTS FOR SPACE & DEFENSE

SME Instructor

Bob Vermillion, CPP, Fellow

NASA Level A Trainer

NASA ESD Technical Authority

DoD ESD Committee

NASA Interagency Working Group (ESD)

2019 DoD Packaging Hall of Fame 2022 IOPP Lifetime Packaging Professional iNARTE® Certified ESD & Product Safety Engineer

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Office & Laboratory

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Kentucky Windage In-Theater

NASA/DoD Contract Vehicle
Service-Disabled Veteran (SDVOSB)
Hispanic Owned Small Business

