

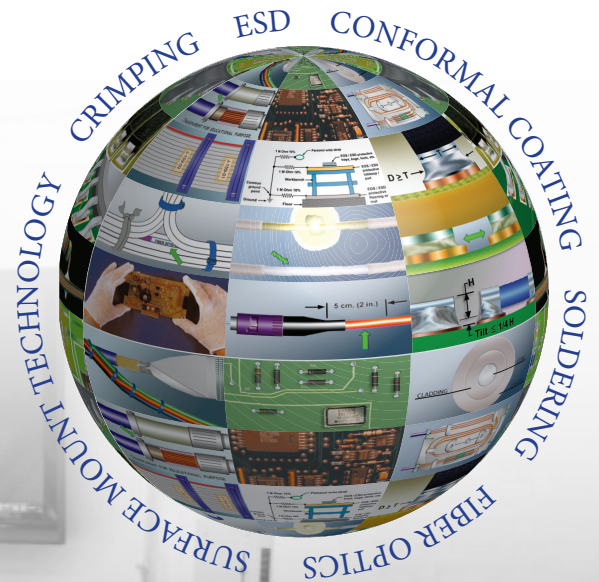


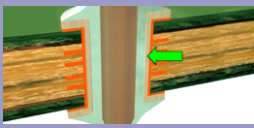
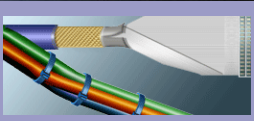






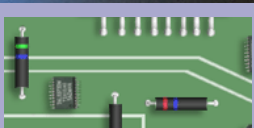
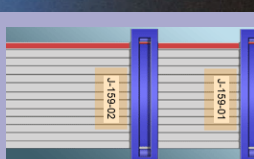
Johnson Space Center Workmanship Training

Special processes require special skills, knowledge and experienced application. For over 15 years, the NASA Johnson Space Center's Receiving, Inspection and Test Facility (RITF) has provided Agency-wide NASA Workmanship Standards compliance training, issuing more than 500 to 800 training completion certificates annually.

It is critical that technicians and inspectors are trained and that they maintain their proficiency to implement the applicable standards and specifications.

Training services include "hands-on" training to engineers, technicians, and inspectors in the areas of electrostatic discharge (ESD), soldering, surface mount technology (SMT), crimping, conformal coating, and fiber-optic terminations.



Soldering	THROUGH-HOLE SOLDERING Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for fabrication of stranded wire and component lead tinning, component mounting and termination.	40 hours	
Cable & Harness	CABLE, HARNESS & CRIMP TRAINING / INSPECTION Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for soldering and crimping stranded wires and cable fabrication and inspection.	40 hours	
Conformal Coating	CONFORMAL COATING & STAKING TRAINING / INSPECTION (POLYMERIC APPLICATION) Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for conformal coating and component and wire harness staking.	24 hours	
ESD	ELECTROSTATIC DISCHARGE CONTROL (ESD) TRAINING LEVELS 2 & 3 Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for Engineers, Operators, Inspectors, Field Engineer Maintenance, Stockroom personnel, or any personnel needing access to ESD sensitive hardware on a regular basis. Level 2 is a prerequisite for Level 3 training.	4 hours	
Surface Mount	SURFACE MOUNT (SM) SOLDERING TRAINING / INSPECTION Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for soldering techniques, component lead tinning, solder dispensing, and component mounting and inspection.	40 hours	
Fiber Optic	FIBER OPTIC TERMINATIONS TRAINING / RETRAINING Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for fiber optic termination and fusion splicing.	24 hours	
Lithium Battery	LITHIUM BATTERY HANDLING FAMILIARIZATION Instructors utilize lectures and demonstrations about the hazards associated with lithium batteries.	2 hours	
Wire Wrapping	WIRE WRAPPING Instructors utilize lectures, demonstrations, and student application to develop required knowledge and skills for wire wrapping techniques, calibration, process control requirements, and inspection criteria.	8 hours	
Torque & Wire	TORQUE AND SAFETY WIRE INSPECTION Instructors utilize lectures, demonstrations, and student application to develop the required knowledge and skills for torque and safety wiring inspection criteria.	Call for info	
NASA Workmanship	NASA WORKMANSHIP STANDARDS FAMILIARIZATION Instructors utilize lectures on through hole and surface mount soldering and inspections, cabling/harnessing/crimping, conformal coating/staking, and fiber optic terminations.	8 hours	
Requirements	REQUIREMENTS FOR SOLDERED ELECTRICAL AND ELECTRONIC ASSEMBLIES (IPC J-STD-001E/S) Instructors utilize lecture, demonstrations, and student application to train students in wires and terminals, through hole technology, surface mount technology and inspection. Base course and Space Addendum are offered.	40 hours	

For more information:
<http://www.nasa.gov/centers/johnson/capabilities/safety/index.html>

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