

MIL-STD-810H Training

Environmental Qualification Testing of Military Equipment

TRAINING PROGRAM DESCRIPTION

Two and a half days of
focused, **Online or On-Site Training**
on **MIL-STD-810H** with Emphasis on “**Tailoring**”

by

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(GDS)



Document Revision Date:
13 November 2023

Foreword

Training on MIL-STD-810H Environmental Testing with Tailoring Examples

This training is important for testing and certifying your military equipment and products following MIL-STD-810H, platform test requirements, and other applicable standards and specifications. The training focuses on the test sections described in the standard document:

MIL-STD-810H
US Department of Defense Test Method Standard
Environmental Engineering Considerations and Laboratory Tests

The instructors share their experience and knowledge gained by working long years designing products and performing tests, i.e., MIL-STD-810H, RTCA-DO-160G, and MIL-STD-461G. The slides are supported by graphics and test videos for the efficiency and clarity of the information, and each session is planned to follow the test methods described in MIL-STD-810H. [Dr. Ismail Cicek](#) is the lead instructor of this training, and several experienced test personnel and design engineers help complete the training sessions efficiently. The following link describes Dr. Cicek's experiences on the topic in more detail:

<https://www.globaldynamicssystems.com/dr-i-cicek/>



Purpose of the Training

The purpose is to have a good understanding of equipment testing by the MIL-STD-810H document.

The attendees completing this training are expected to know the following:

- Understand MIL-STD-810H test methods and procedures
- Understand how to apply tailoring given Life Cycle Environmental and Mission Profiles
- Be able to write a list of susceptibilities
- Understand the test process goals and activities
- Develop test plans and schedule tests
- Execute tests
- Understand test results
- Create test reports
- Be able to resolve test results by applying change recommendations or accepting anomalies with risk assessment.

Training Scope

The training sessions cover the following topics with annotated slides, test photos, videos, and additional reference material from standards, specifications, and guides:

- Systems Engineering Process Overview and Test & Evaluation (T&E): Important Concepts, such as Product Development and V&V Processes, Test Requirements, Requirements Management, Concepts of Operations (CONOPS) Environmental Profile (LCEP), and Mission Profile/Requirements.
- Tailoring Process
- MIL-STD-810H Part I, II, and III
- Understanding the Purpose of the Test Methods
- Test Methods and Procedure Selection based on Equipment Type
- Developing a List of Susceptibilities
- Test Equipment, Chambers, and other Devices
- Test Procedures and Other Technical Details of Running Tests with Tailoring
- Scheduling and implementation of the Tests
- Review of Test Reports
- Design Issues, Discussion of Test Failures, Test Interruptions, and Recommendations
- Risk Management Process for Resolving Anomalies
- Additional or Alternative Standards (Military and Industrial) and Test Recommendations

Read more details about this training content at the [GDS Website:](https://www.globaldynamicsystems.com/systems-engineering-training-courses/)
<https://www.globaldynamicsystems.com/systems-engineering-training-courses/>

Instructors

Dr. Ismail Cicek mainly provides training, assisted by several GDS personnel experienced in environmental testing and management.

Dr Ismail Cicek provides training with over 20 years of experience in the environmental qualification testing of products such as MIL-STD-810H and RTCA-DO-160G. Dr Cicek led various engineering programs and projects and managed the US Air Force test projects for many years. Dr Cicek worked as the lab chief engineer for five years at the US Air Force Aeromedical Test Lab at WPAFB, OH. Training is also assisted by our personnel, who are experienced in designing and environmental testing military and aerospace equipment.

Read DAU Paper: "A New Process for the Acceleration Test and Evaluation of Aeromedical Equipment for U.S. Air Force Safe-To-Fly Certification." [Click to display this report.](#)

Since 2009, the GDS Team has provided MIL-STD-810, RTCA-DO-160, and MIL-STD-461 training courses to more than five hundred students and over one hundred organizations worldwide. Read more details about the instructors at <https://www.GlobalDynamicSystems.com>.

Training Schedule and Execution Type

- Online training using ZOOM.
- Led by two live instructors experienced in the field by testing and lecturing.
- Two and a half days of focused online training schedule is typically as follows
 - 1st Day: 08:00 – 16:30 (Lunch Break between 12:30 and 13:30)
 - 2nd Day: 08:00 – 16:30 (Lunch Break between 12:30 and 13:30)
 - 3rd Day: 08:00 – 12:00
 - Time zone: Central European Time (CET)
- Attendees will receive a Training Certificate.
- Training includes knowledge check quizzes, a competition type, a fun way, or learning with prizes.

Attendees will receive a Training Certificate.

Visit the GDS Website to check the calendar of scheduled training classes and for registration information. You can also email us with your registration request at info@GlobalDynamicSystems.com.

Our training calendar includes all open training classes, including RTCA-DO-160, MIL-STD-810, and MIL-STD-461.

Training Contents (Detailed)

Training covers each test section of the MIL-STD-810H, and the following items are discussed in each of the individual training sessions:

- Purpose of the Test. Potential Environmental Effects to Equipment Under Test (EUT) Fundamental Subjects (that may be of importance for understanding)
- Equipment Types and Test Requirements.
- Test Equipment, Cabins, or Devices / Test Environment / Test Pass/Fail Criteria
- Test Procedures / Evaluation of the Test Results
- Potential Failures and Design Recommendations Additional Discussions and Recommendations
- It also includes some tests not included in the MIL-STD-810H, yet it may be a requirement.

MIL STD-810H Test Methods

500.6 Low Pressure (Altitude)	516.8 Shock
501.7 High Temperature	517.3 Pyroshock
502.7 Low Temperature	518.2 Acidic Atmosphere
503.7 Temperature Shock	519.8 Gunfire Shock
504.3 Contamination by Fluids	520.5 Combined Environments
505.7 Solar Radiation (Sunshine)	521.4 Icing/Freezing Rain
506.6 Rain (IP for Water)	522.2 Ballistic Shock
507.6 Humidity	523.4 Vibro-Acoustic/Temperature
508.8 Fungus	524.1 Freeze / Thaw
509.7 Salt Fog	525.2 Time Waveform Replication
510.7 Sand and Dust (IP for Sand/Dust)	526.2 Rail Impact
511.7 Explosive Atmosphere	527.2 Multi-Exciter
512.6 Immersion (IP for Water)	528.1 Mechanical Vibrations of Shipboard Equipment (Type I – Environmental and Type II – Internally Excited
513.8 Acceleration	
514.8 Vibration	
515.8 Acoustic Noise	

Platform and equipment test examples are provided in each test method presentation and discussion, including:

- Military aircraft platforms (fixed and rotary wing), ground vehicles, and navy ships
- Avionics, electrical and mechanical systems, and structural project applications
- Test tailoring examples to include the selection of tests, parameter levels, and durations
 - Concepts of Operations (CONOPS) document and test curve establishment.
 - Tailoring and Life Cycle Environmental Profile (LCEP)
 - Mission Profile

For tailoring, read more at <https://www.globaldynamicssystems.com/posts/mil-std-810h-training-tailoring-is-essential-explained/>.

Training Material

The instructors present the topics using slides referencing MIL-STD-810H methods and procedures, including information from relevant regulations, standards, and specifications. The lecturers provide slides to share their experiences and knowledge gained by working long years in the field and performing tests following MIL-STD-810H, RTCA-DO-160G, and MIL-STD-461G. Many graphics and test videos support the slides, ensuring the efficiency and clarity of the information.

The slides and other sharable course material will be shared with the registered students before the class using GOOGLE DRIVE.

- Registration includes all presentations and additional material shared before the class. Visit the [GDS Website](#) to view the registration process details.



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Global Dynamic Systems is an official member of RTCA Organization.

Our References

We have provided training courses to over 100 companies and organizations and over 500 individual trainees.

