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# **Electrical Grounding and Shielding For Military Standards MIL-STD-461, MIL- STD-1399, and MIL-STD-1310**

[View Course Details](#)

## **COURSE DATES AND TIMES**

This 12-Hour, two-day course provides a comprehensive overview of electrical grounding and shielding for military applications, based on the MIL-STD-461, MIL-STD-1399, and MIL-STD-1310 standards. The course is designed for electrical engineers, technologists, and designers who are involved in the design, development, and testing of electronic equipment used in military applications.

Participants will learn about the principles and concepts of electrical grounding and shielding, as well as the various types of grounding and shielding systems and techniques used in different applications. They will also gain an understanding of the testing requirements and procedures for verifying the effectiveness of grounding and shielding systems.

The course will cover best practices for grounding and shielding in military applications, including design considerations, common challenges and pitfalls, and case studies of successful grounding and shielding designs. Participants will also learn about lightning protection and surge suppression techniques and requirements, and the importance of ongoing training and development in this field.

At the end of the course, participants will be able to:

- Understand the principles and concepts of electrical grounding and shielding
- Select the appropriate grounding and shielding systems and techniques for different applications
- Test and troubleshoot grounding and shielding systems according to standards
- Design effective grounding and shielding systems that comply with safety and EMC standards
- Implement lightning protection and surge suppression techniques to protect electronic equipment

- Overall, this course provides a valuable learning opportunity for professionals involved in the design and development of electronic equipment used in military applications, helping them to ensure the safety, performance, and reliability of their equipment in harsh environments.

## WHO SHOULD ATTEND

- Utility And Industrial Electrical Engineers And Engineering Technicians
- Project Engineers
- Design Engineers
- Field Technicians
- Electrical Technicians
- Electricians
- Plant Operators
- Plant Engineers
- Electrical Supervisors

## STUDENTS RECEIVE

- 100-Page Digital Electrical Grounding Handbook - Value \$20 (Details Below)
- 1.2 Continuing Education Unit (CEU) Credits (12 Professional Development Hours)
- A **FREE** Magazine Subscription (Value \$25)
- **\$100** Coupon Toward Any Future Electricity Forum Course (Restrictions Apply)
- Course Materials in PDF Format

## COURSE OUTLINE

### Day 1:

#### Session 1: Introduction to Electrical Grounding and Shielding

- Definition and importance of electrical grounding and shielding
- Overview of MIL-STD-461, MIL-STD-1399, and MIL-STD-1310 standards
- Examples of negative effects of improper grounding and shielding
- The relationship between grounding and shielding
- Applications of grounding and shielding

#### Session 2: Electrical Grounding

- Grounding principles and types of grounding systems
- Requirements and techniques for grounding according to MIL-STD-1399

- Grounding methods for different equipment types
- Grounding considerations in various environments

### **Session 3: Electrical Shielding**

- Shielding principles and types of shielding materials and techniques
- Shielding requirements according to MIL-STD-461
- Shielding design considerations for different equipment types
- Shielding considerations in various environments

### **Session 4: Grounding and Shielding Testing**

- Overview of testing requirements in MIL-STD-461 and MIL-STD-1399
- Testing procedures and methods for grounding and shielding
- Interpretation of test results and troubleshooting techniques
- Common testing mistakes and ongoing maintenance

### **Day 2:**

### **Session 5: Shipboard Electrical Grounding and Shielding**

- Overview of the shipboard electrical system
- Grounding and shielding requirements according to MIL-STD-1310
- Design considerations for shipboard electrical systems
- Common challenges in shipboard electrical grounding and shielding
- Best practices for shipboard electrical grounding and shielding

### **Session 6: Lightning Protection and Surge Suppression**

- Overview of lightning protection and surge suppression
- Lightning protection requirements according to MIL-STD-1310
- Surge suppression techniques and requirements
- Common challenges in lightning protection and surge suppression
- Best practices for lightning protection and surge suppression

### **Session 7: Grounding and Shielding Best Practices**

- Best practices for grounding and shielding in military applications
- Common mistakes and pitfalls to avoid
- Case studies and examples of successful grounding and shielding designs
- Importance of ongoing training and development
- Resources for further learning and development

## **Session 8: Review and Conclusion**

- Recap of key concepts and topics covered in the course
- Q&A session for attendees
- Importance of ongoing maintenance and monitoring of grounding and shielding systems
- Course evaluation and feedback
- Closing remarks and next steps

Contact us Today for a FREE quotation to deliver this course at your company's location.

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