



2011 NEC®

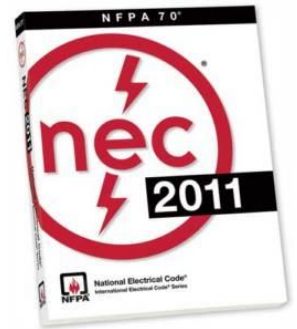
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TECHNICAL TRAINING GROUP®

National Electrical Code® - 2 Days

You will receive Jim's 300+ Page Course Notebook

This 2 Day class covers the major articles found in the latest edition of the National Electrical Code®. You will not only learn what the various code articles mean, but you will also learn how to correctly apply the code in the design and installation of electric power systems. Rather than just going through the articles, you will also see how and why some of the articles were developed to gain a better understanding of their meaning. This 2 day class has many examples and problems to solve that reinforce the concepts. You will also learn where some of the major exceptions and traps can be found.



Course Credit: 2 Days - 1.6 CEUs or 16 PDHs

Course Agenda

Article		Article	
90	Introduction	392	Chapter 3 Wiring Methods and Materials
	Chapter 1 General	398	Cable Trays
100	Definitions		Open Wiring on Insulators
110	Requirements for Electrical Installation	Article	Chapter 4 Equipment for General Use
Article	Chapter 2 Wiring and Protection	408	Switchboards and Panelboards
210	Branch Circuits	430	Motors, Motor Circuits and Controllers
215	Feeders	440	Air Cond. and Refrigeration Equipment
220	Branch, Feeder, and Service Calculations	445	Generators
230	Services	450	Transformers and Transformer Vaults
240	Overcurrent Protection	460	Capacitors
250	Grounding and Bonding	490	Equipment Over 600 Volts, Nominal
Article	Chapter 3 Wiring Methods and Materials	Article	Chapter 5 Special Occupancies
300	Wiring Methods	500	Hazardous Locations - Class I, II, and III
310	Conductors for General Wiring	501	Class I Locations
320	Armored Cable: Type AC	502	Class II Locations
324	Flat Conductor Cable: Type FCC	503	Class III Locations
326	Integrated Gas Spacer Cable: Type IGS	504	Intrinsically Safe Systems
328	Medium Voltage Cable: Type MV	505	Class I, Zone 0, 1 and 2 Locations
330	Metal Clad Cable: Type MC	517	Health Care Facilities
334	Nonmetallic Sheathed Cable: NM, NMC, NMS		Chapter 6 Special Equipment
338	Service-Entrance Cable: Type SE and USE	690	Solar Photovoltaic Systems
340	Underground Feeder and Branch Circuit Cable	694	Small Wind Electric Systems
342	Intermediate Metal Conduit: IMC		Chapter 7 Special Conditions
344	Rigid Metal Conduit: Type RMC	700	Emergency Systems
348	Flexible Metal Conduit: Type FMC	701	Legally Required standby Systems
352	Rigid Polyvinyl Chloride Conduit: Type PVC	702	Optional Standby Systems
358	Electrical Metallic Tubing: Type EMT		Design Examples and Problems
362	Electrical Nonmetallic Tubing: Type ENT		
368	Busways		
380	Multioutlet Assembly		

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For more information contact:
T₂G Technical Training Group® at 800-874-8883.

See sample videos of Jim's teaching style at:
www.brainfiller.com



Biography

Jim Phillips, P.E.

Member of IEEE 1584 *IEEE Guide for Performing Arc Flash Hazard Calculations*

Co-Chairman of Task Group - *IEEE 1584.1 Guide for the specification of scope and deliverable requirements for an arc-flash hazard calculation.*

Member of IEC 61482-1-2 Determination of arc protection class of material and clothing by using a constrained and directed arc (box test)

Author of the book: *Complete Guide to Arc Flash Calculation Study* available later this year.

Has a regular column in Electrical Contractor Magazine *Arc Flash - Unplugged*

Founder of the internationally known website www.ArcFlashForum.com

For almost 30 years, Jim has been helping tens of thousands of people around the world understand electrical power systems design, safety, theory and applications. Having taught almost 2000 seminars during his career to people from all seven continents (Yes Antarctica is included!), he has developed a reputation for being one of the best trainers and public speakers in the electric power industry.

Jim does not just talk about electrical power systems - he is part of the development of some of the standards! He is also the instructor that has taught other instructors in the industry. Jim is a member of the IEEE 1584 Committee - *IEEE Guide for Performing Arc Flash Hazard Calculations* which is the predominant method for performing arc flash calculation studies. He is Co-Chairman of the IEEE Task Group - IEEE 1584.1 "Guide for the specification of scope and deliverable requirements for an arc-flash hazard calculation study in accordance with IEEE 1584"

He wrote "How to Perform an Arc Flash Study in 12 Steps" which was published by the NFPA. He just completed the book "Complete Guide to Arc Flash Calculation Studies" that is about to be released. This book is a step by step approach for conducting the arc flash study and it answers many of the controversial questions about the codes and standards.

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Jim created the internationally known website www.ArcFlashForum.com which is used by the global community for understanding arc flash and electrical safety.

He writes a regular for Electrical Contractor Magazine and previously was one of the main contributors for the NEC Digest. He also authored several articles published in Europe as well as speaking at several European conferences about Arc Flash. You can download many of his articles at www.brainfiller.com library. Jim is also involved with arc flash testing and forensic analysis of arc flash accidents.

Throughout his career he has served on many committees including the Energy Policy Committee of IEEE in Washington DC. He is a member of The National Fire Protection Association - NFPA, The Power Engineering Society and the Industry Applications Society.

Jim earned a BSEE Degree in Electrical Engineering at the Ohio State University. After Ohio State, his first job was with Square D Company's Power System Analysis Group where he was responsible for system studies, power system software development and training at their engineering training programs. Jim is a Registered Professional Engineer in Ohio and Kentucky.

Later, Jim worked for Ohio Edison Company where he headed up the studies group of the System Protection Section. While working for Ohio Edison, he was part of the adjunct faculty for Stark State College where he taught evening classes in electrical power systems.

Jim's experiences have included everything from planning transmission systems, to design and analysis of industrial and commercial power systems and cogeneration plants. His teaching experience ultimately led to the creation of T2G Technical Training Group in the 1980's which provides training programs, videos and continuing education on a wide array of electrical power system topics.



Jim, in the high power lab setting up an arc flash test on a pad mount transformer.