



PowerCET® Corporation

3350 Scott Blvd.,
Bldg. 55, Unit 1
Santa Clara, CA 95054
www.powercet.com

Please route to:

Power Quality Class Schedule for 2003 with 8 New Courses

Featuring Authorized Training for these companies:



 Electro Industries/GaugeTech

HIOKI

 **Reliable Power Meters**
A Fluke Company

Courses in:

Santa Clara • Dallas • Orlando • Chicago • New Jersey



Identify and Solve your Power Quality Problems with Expert Training from PowerCET Corporation

Getting to the bottom of system malfunctions and hardware failures is no easy matter. It takes the right tools, knowledge and experience to sort through all of the symptoms and data to **get to the real cause of your power quality problems.**

That's where PowerCET® comes in. PowerCET®'s equipment-intensive, personalized courses include in-depth coverage of Power Quality, Equipment Sensitivity and Harmonics. PowerCET® is the training resource for **Dranetz-BMI, Reliable Power Meters, Hioki and Electro Industries/Gaugetech**, offering operational training to help you **get top performance from your power quality analysis instruments.**

Courses are held throughout the year in Santa Clara, California
Chicago, Illinois and many other locations throughout the USA.
Standard and customized in-house programs are also available.



Call (408) 988-1346, ext. 101, for more information or to register.

PowerCET® Corporation
3350 Scott Blvd., Bldg 55, Unit 1, Santa Clara, CA 95054 • (408) 988-1346, ext. 101 • Fax (408) 988-4869
www.powercet.com • www.pqtoday.com

Power Quality Courses

NEW Power Quality for the New Millennium

COURSE: PQ303

3 DAYS

This freshly-updated, comprehensive three-day course is designed specifically for those who must troubleshoot and diagnose power, facility wiring and grounding problems. The course complements and incorporates leading edge procedures for Power Quality Analysis.

You will learn about the determinants of power quality: geographic location, electrical utility system, facility/utility interface, building wiring system, data and telecommunication networks, and electrical loads, as well as proven techniques for rapidly identifying and solving power quality problems. Upon completion, you'll be able to make an immediate contribution to your facility and possess the understanding and skills necessary to perform power quality surveys.

You will learn how to...

- Analyze recorded power monitor data
- Evaluate the quality of utility electrical service
- Identify the impact of facility/utility interface configuration: delta-wye vs. wye-wye
- Analyze facility wiring and its impact upon power quality and equipment interaction
- Judge the effects of multiwire distribution and load harmonics
- Select effective power mitigation devices
- Assess the effect of various loads upon your facility
- Measure the interference loop created between electrical wiring and data/telecommunication network wiring
- Plan & perform an effective power quality survey
- Prepare a survey report and present the data in a meaningful and effective manner

NEW Modern Harmonics: Problems, Analysis and Solutions

COURSE: MH201

2 DAYS

Power frequency harmonics have become a problem in many modern facilities. The compound effects of increasing densities of personal computers, wider usage of adjustable speed drives and the inability of traditional distribution systems to support the demands of these loads can create havoc. Proper management of any facility requires a greater knowledge of the effects of harmonics, the means to identify harmonic problems and the tools available to solve harmonic problems.

In this comprehensive two-day course, you will gain an understanding of reactive and harmonic loads and their impact on your facility. You will learn measurement, detection and correction techniques for harmonic and reactive power problems. You will learn to recognize and avoid the pitfalls caused by harmonically excited resonance and learn to apply IEEE 519 to control harmonics.

You will learn how to...

- Avoid measurement errors caused by harmonically insensitive meters and other equipment
- Recognize load harmonics and load interaction
- Evaluate the effect of load harmonics upon facility distribution systems
- Control adverse power factor without risking harmonically excited resonance
- Measure and anticipate the magnetic fields caused by harmonic loads
- Correct or reduce unwanted harmonic currents
- Avoid power factor penalties and reduce total demand distortion

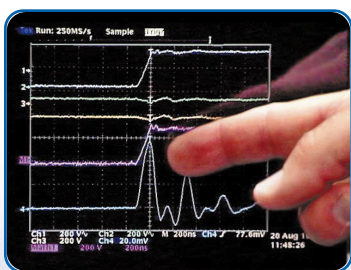
NEW Grounding for Equipment Performance + NEC2002

COURSE: GND501 1 DAY

Recently updated to reflect the latest changes in the NEC, this intensive one-day course clears up the mysteries surrounding grounding practice through the application of sound scientific principles. You'll learn how the misunderstood grounding requirements of electronic equipment have led to specialized grounding techniques that not only degrade equipment performance, but may also violate the National Electrical Code. Terms such as single-point grounding, multiple-point grounding, isolated grounding, and equipotential reference grounding are illustrated and explained. The course looks at grounding from a fresh perspective, focusing on solutions.

You will learn...

- How the latest NEC impacts grounding issues
- The difference between floated and grounded electrical systems
- The adverse effects of voodoo grounding schemes
- Why isolated ground receptacles work in some cases and not in others
- How ground plane technology prevents skin effect from defeating equipment grounding



"...The course was very informative..."

-NWU Facilities Manager



"...The real-world examples were the best part..."

-V. Med. Systems Technician

Get the Knowledge and Skills You Need to Solve Power Quality Problems

PowerCET® courses give you the tools to identify, understand and solve complex power quality and electrical environment problems. These programs are based upon extensive field experience and years of research and development in power measurement, mitigation devices and installation practices. The courses are equipment-intensive and demonstration-oriented to maximize their effectiveness.

Problems and Solutions for Sensitive Equipment

COURSE: PSE100 1 DAY

Solving tomorrow's power quality problems will require an understanding of the new technologies and their potential to introduce interference. This constantly-updated course examines equipment sensitivity and the changing sources of interference. The course provides an in-depth examination of changing equipment sensitivity and identifies the proper Power Quality tools and measurement techniques to pinpoint causes of equipment upset.

You will learn...

- The relationship between EMF, harmonics and wiring
- Effects of cellular, mobile radios and wireless technology on electronic systems
- The relationship between processor speed and RF interference sources

NEW! Intro to Power Quality Waveform Analysis

COURSE: WF501 1 DAY

The visual display of recorded waveforms in the latest generations of powerful graphics intensive power monitors can help you identify power and equipment interaction problems ...if you can interpret the resulting data and waveforms! This popular, constantly-updated course will help you record meaningful data, understand waveform capture, and aid in data/waveform interpretation. A great follow-up course for students taking or who have completed PowerCET's operational skills courses on Dranetz-BMI, RPM, Fluke, EIG NEXUS and Hioki PQ monitoring equipment.

You will learn...

- Waveform capture fundamentals
- Effects of sinusoidal & non-sinusoidal loads
- Ohm's law and waveform analysis
- Interpreting waveforms from linear & non-linear sources
- Understanding the analytical tools available in power monitoring programs
- Understanding the limits of power monitoring tools

NEW! Advanced Waveform Analysis & Case Studies

COURSE: WF502 1 DAY

In this course you'll view a variety of real-world waveforms, each illustrating a particular PQ problem with discussion on solving the problem. Through dozens of case studies, this new course will help you recognize, analyze and resolve common problems. A great follow-up course for students taking or who have completed course WF501 and/or PowerCET's operational skills courses on Dranetz-BMI, RPM, Fluke, EIG-NEXUS and Hioki PQ monitoring equipment.

You will learn...

- Effects of high impedance neutral conductors
- Inrush current in transformers, motors & capacitors
- Power factor correction capacitors vs. resonance
- Fault current & distribution impedance
- Voltage transient propagation

NEW! UPS Systems: Problems and Solutions

COURSE: UPS501 1 DAY

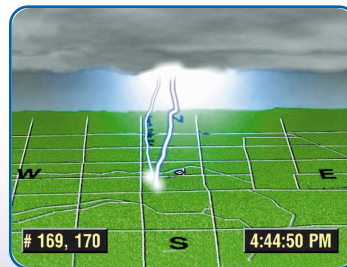
UPS systems are used worldwide to power electrical and electronic equipment. This seminar addresses the many potential problems with UPS systems, e.g. the type of UPS selected for use may not be appropriate for the application, or UPS maintenance is continuously deferred to the point that UPS/load interaction problems become chronic.

You will learn...

- UPS Topologies -- on-line, off-line, line-interactive
- N+1 redundancy and lightly loaded UPS systems
- Mechanical vs. solid-state UPS considerations
- Separately derived grounding and UL requirements for neutral continuity
- Waveform distortion and load interaction problems
- Closed vs. open transition ATS and the effects of decay time and synchronizing circuitry
- Harmonic filters and interaction potentials
- Battery and capacitor maintenance issues
- Internal vs. external monitoring systems for power
- Battery monitoring vs battery functionality



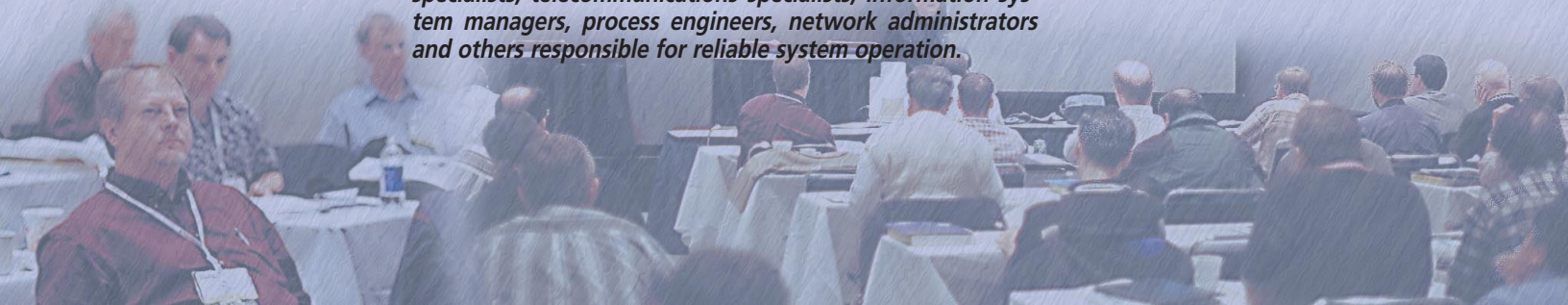
"...The instructor was very knowledgeable..."
-WVP Utility Engineer



"...great instructional aids..."
-WBM Hospital Facilities Manager

Who Should Attend:

Facilities engineers, plant engineers, utility power quality specialists, telecommunications specialists, information system managers, process engineers, network administrators and others responsible for reliable system operation.



Operational Skills Courses

PowerCET® Technical Training courses will help you get optimum use from your **Dranetz-BMI, RPM** and **Fluke** monitoring equipment. These one-day (Fluke courses are ½ day), hands-on courses walk you through equipment setup, monitoring connections, threshold and report programming, data acquisition and analysis, and PC-based software. **A certificate is awarded upon completion of each class.**

Dranetz-BMI Model 4300 Power Platform: Application, Operation & Programming

COURSE: OP4300 **1 DAY**

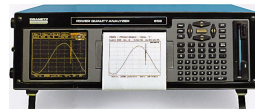
This factory-authorized course provides you with the skills to effectively use the Dranetz Model 4300 Power Platform equipped with the PQLite TaskCARDS. The course helps you take advantage of the unique capabilities of the Model 4300 in general power quality applications, equipment testing and verification and troubleshooting.



Dranetz-BMI 658 Power Quality Analyzer: Operation & Application

COURSE: OP658 **1 DAY**

In this factory-authorized course you will learn the advanced features of the Dranetz 658 Power Quality Analyzer, including high frequency capture and sub-cycle analysis. Software analysis is covered using the 658 and DranView.



Dranetz-BMI Model PP1-PQ+ Power Quality: Application, Operation & Programming

COURSE: PP1-PQ+ **1 DAY**

This factory-authorized course covers the Dranetz Power Platform equipped with the PQ Plus TaskCARD. You'll learn to record transients, voltage anomalies, harmonic distortion and power utilization, and analyze data with DranView.



Basic RPM Power Recorder and PC Software: Operation & Application

COURSE: PRS100 **1 DAY**

This factory-authorized course teaches you basic Power Recorder features and operation. The course covers the Power Recorder with the full set of system options, including Power Consumption, Multi-Session, Harmonics and Flicker Measurement. Software covered: Power Analysis Software with Pro Report Writer, Scenario.



Nexus 1250/1270 Power Meter and PC Software: Operation & Application

COURSE: OP1250 **1 DAY**

This factory-authorized course teaches you basic Power Meter features and operation, with a special emphasis on power quality data acquisition, retrieval and analysis. Software covered: Nexus Communicator, AiReports.



Hioki 3196 Power Quality Analyzer: Operation, Application & Programming

COURSE: OP3196 **1 DAY**

This factory-authorized course teaches you Hioki 3196 PQ Analyzer data acquisition, analysis and remote control. You'll learn to record transients, voltage anomalies, harmonic distortion and power utilization, and analyze your PQ data.



Fluke 43 PQ Analyzer: Operation & Application

COURSE: FOA43 **½ DAY**

This course gets you up to speed quickly using the advanced features of the Fluke 43. You'll learn to perform waveform analysis and measurements to identify sources of electrical disturbances. *Available as an in-house course only.*



Fluke 41 PQ Analyzer: Operation & Application

COURSE: FOA41 **½ DAY**

This course gets you up to speed quickly using the advanced features of the Fluke 41. You'll learn to perform waveform analysis and measurements to identify sources of electrical disturbances. *Available as an in-house course only.*



Operational Skills Courses on VHS Tape, CD-ROM, DVD

Dranetz-BMI PP 4300 Operational Skills

Training on PP4300 / TASKCard® PQ-Lite™. Includes 95 min. video, 100-page workbook, data & setups on disk. Covers hardware familiarity, real-time & Easy-Start monitoring, custom setups, and viewing events.

A-VT4300/CD/DVD \$395

Dranetz-BMI 658 PQ Analyzer Operational Skills

Training on 658 PQ Analyzer. Includes 80 min. videotape, 80-page workbook, sample data & setups on disk. Covers hardware familiarity, real-time, long-term, & remote monitoring, custom setups, and viewing event data.

A-VT658/CD/DVD \$395

DRAN-VIEW® 5.x Operational Skills (CD-ROM only)

Import data from the Dranetz-BMI PP4300, 658 and PP1 to your PC and analyze it with DRAN-VIEW® 5.x. Covers data transfer, basic & advanced DRAN-VIEW, Report Writer and Optional Math Package.

A-DVIEW5-CD \$195

Basic RPM Power Recorder & PC Software Operational Skills (CD, DVD only)

Learn the basic features of the RPM Power Recorder and Power Analysis software. Covers setup, real-time monitoring, long-term monitoring, data download and analysis, exporting data and Professional Report Writer.

A-PRS100-CD/DVD \$395

Basic Nexus 1250 Power Meter and PC Software Operational Skills (CD, DVD only)

Learn basic Power Meter features and operation, focusing on power quality data acquisition and analysis. Covers meter setup to maximize PQ data acquisition and retrieval, Nexus Communicator and AiReports software. *Available Q2, 2003*

A-NX1250-CD/DVD \$395

Basic Hioki 3196 Power Quality Analyzer Operational Skills (CD, DVD only)

Learn basic Hioki 3196 PQ Analyzer data acquisition, analysis and remote control. You'll learn to record transients, voltage anomalies, harmonic distortion and power utilization, and analyze your PQ data. *Available Q2, 2003*

A-HI3196-CD/DVD \$395



DVD versions available Q1, 2003

Power Quality Courses on VHS Tape, CD-ROM & DVD

Professional Advancement ("PAC") Courses *Sale: \$199 each, 3/\$499, 5/\$799, 10/\$1399!*

"PAC" Courses are PowerCET's 1-day classes taped at the POWERSYSTEMS WORLD conference. They are full of useful case studies and "war stories" on how power quality problems are investigated and solved. Workbook included on disk (.pdf). Each program is 5-6.5 hours long. DVDs available Q1, 2003



Troubleshooting and Diagnosing UPS and ATS Systems

A-PAC10-02/CD/DVD \$199

This course addresses power quality issues affecting users of UPS and ATS systems. Proper selection and maintenance, grounding and code issues, and load interactions are among the problems and solutions presented.



Prevention and Forensic Analysis of Lightning Damage

A-PAC16-02/CD/DVD \$199

This 2 segment course covers both prevention of lightning damage for increased reliability, and the use of historical, radar and satellite data, as well as site inspections to analyze lightning damage to facilities.

Case Studies, Equipment Sensitivity & Monitoring Methodologies

A-PAC25-01/CD/DVD \$199

This course focuses on those missing and elusive aspects of the power quality investigation process: waveform interpretation, error log correlation, equipment sensitivities, power monitor placement and limitations.

Lightning Hardening & Advanced Surge Suppression

A-PAC15-01/CD/DVD \$199

This course explains how lightning strikes buildings and structures, and reducing lightning current's flow in building power, telecommunication, data and signal lines. Covers use of National Lightning Detection network data.

Power Protection & Grounding for Information Technology Systems

A-PAC11-00/CD/DVD \$199

This course focuses on power quality and equipment compatibility issues in IT. Covers: cable grounding and bonding, signal reference grounding in raised floor environments, lightning protection, RF mitigation, intra and inter building cable installation, MTBF vs. anticipated equipment reliability, monitoring systems, & ESD control.

Monitoring Tools and Case Studies for Power Quality

A-PAC21-00/CD/DVD \$199

This course focuses on useful tools that will help the user identify and track down problems. Selected case studies focus on common problems and illustrate the use of tools to solve these problems. Covers: gaussmeters, ESD meters, power monitors, recording multimeters, digital storage scopes, and digital fault recorders.

Solving Harmonics Problems Using Power Analyzers

A-PAC10-98/CD/DVD \$199

In this course, you'll learn to identify common sources of harmonics, and the effects of harmonics on traditional distribution systems. You'll analyze harmonic data from a variety of Power Analyzers. And, you'll learn what tools are available to solve harmonics problems.

Waveform Analysis & Monitoring Concerns

A-PAC17-99/CD/DVD \$199

Waveforms recorded on power monitors can help you identify power and equipment interaction problems ...if you can interpret them! This course will help you record meaningful data, understand waveform capture, and aid in data/waveform interpretation. Includes scores of case studies illustrating waveform interpretation.

Grounding for Equipment Performance

A-PAC22-98/CD/DVD \$199

This course clears up the mysteries surrounding grounding practice. Learn appropriate grounding techniques for electronic equipment. Single-point grounding, multiple-point grounding, isolated grounding and equipotential reference grounding are illustrated and explained.

Protecting Commercial and Industrial Facilities

A-PAC25-99/CD/DVD \$199

Comprehensive training on the nature of electrical interference, with particular emphasis on lightning. You'll learn how lightning currents flow in building power, telecommunications, data and signal lines. Learn how to implement an effective facility protection and grounding system.

Adjustable Speed Drives: Problems, Analysis and Solutions

A-PAC31-98/CD/DVD \$199

In this course, you learn the advantages and pitfalls of using adjustable speed drives (ASDs) and techniques to minimize adverse effects. This course examines the use of ASD equipment and focuses on application and interaction issues associated with ASDs.

Facility and Equipment Grounding - 2000

A-VTGND-00/CD/DVD \$199

This course gives you a solid foundation in grounding issues, allowing you to solve common problems. Covers facility grounding, ground fault detection, reference grounding, data and communication grounding, isolated grounds, supplemental grounds, and general grounding do's and don'ts. Approximately 5.5 hours long.

Power & Grounding for Semiconductor & Component Fab Facilities

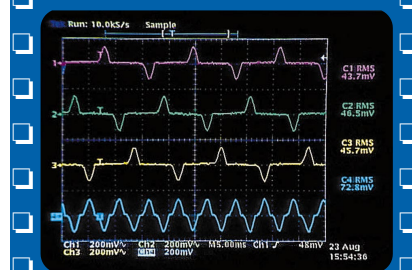
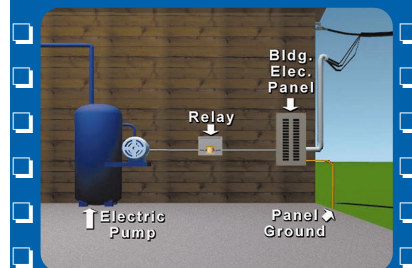
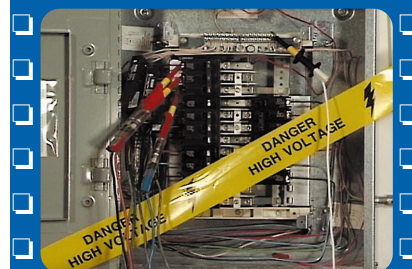
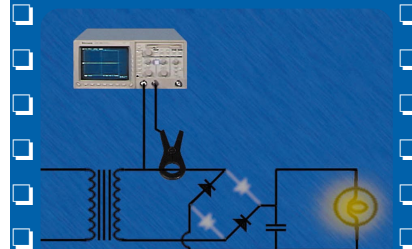
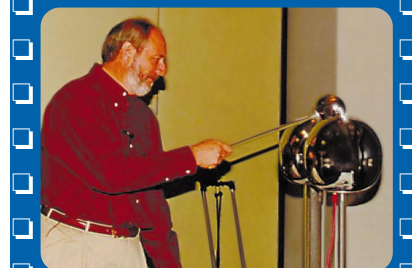
A-VTFAB-00/CD/DVD \$199

A 3.5 hr. course focused on power quality & equipment performance issues in Fab. Covers: reference grounding, harmonic sources, RF utilization, sources & paths, effects of welding, ionization systems and voltage supply issues.

Problems and Solutions for Sensitive Equipment

A-VTESM-00/CD/DVD \$199

This five-hour course examines equipment sensitivity and the changing sources of interference, including under and overvoltage, outages, harmonics, EMF, grounding issues and EMI/RFI. Helps resolve common problems.



Course Registration / Tape / CD-ROM Order Form

Mail or Fax the completed form (1 per student), or register / purchase by phone or online.
 PowerCET® Education & Training, 3350 Scott Blvd., Bldg. 55, Unit 1, Santa Clara, CA 95054
 (408) 988-1346, ext. 101, Fax: (408) 988-4869 www.powercet.com, www.pqtoday.com

Name	Title	
Telephone	Ext	Fax
Company	Division	
Mailing Address	Mail Stop/Floor	
City	State	Zip
Email		

Classroom Courses:

Dates	Course Number & Description	Price	Total
	PQ303: Power Quality for the New Millennium (3-Days)	\$1195	
	MH201: Modern Harmonics: Problems, Analysis, Solutions (2-Days)	\$895	
	GND501: Grounding for Equipment Performance/NEC-2002 (1-Day)	\$495	
	PSE100: Problems & Solutions for Sensitive Equipment (1-Day)	\$495	
	WF501: Power Quality Waveform Data Analysis (1-Day)	\$495	
	WF502: Advanced Waveform Analysis and Case Studies (1-Day)	\$495	
	UPS501: Uninterruptible Power Systems: Problems & Solutions (1-Day)	\$495	
	OP4300: Dranetz-BMI Model 4300 Power Platform (1-Day)	\$495	
	OP658: Dranetz-BMI 658 Power Quality Analyzer (1-Day)	\$495	
	PP1-PQ+: Dranetz-BMI Model PP1-PQ Plus Power Quality (1-Day)	\$495	
	PRS100: Basic RPM Power Recorder & PC Software (1-Day)	\$495	
	OP1250: EIG Nexus 1250/70 Power Meter & Software (1-Day)	\$495	
	OP3196: Hioki 3196 Power Quality Analyzer (1-Day)	\$495	

Tapes, CDs, DVDs: (DVDs available Q1, 2003):

	VHS	CD	DVD
Troubleshooting and Diagnosing UPS and ATS Systems (A-PAC10-02)			
Prevention and Forensic Analysis of Lightning Damage (A-PAC16-02)			
Case Studies, Equip. Sensitivity & Monitoring Methods (A-PAC25-01)			
Lightning Hardening & Advanced Surge Suppression (A-PAC15-01)			
Power Protection & Grounding for Info. Technologies (A-PAC11-00)			
Monitoring Tools & Case Studies for Power Quality (A-PAC21-00)			
Solving Harmonics Problems using Power Analyzers (A-PAC10-98)			
Waveform Analysis and Monitoring Concerns (A-PAC17-99)			
Grounding for Equipment Performance (A-PAC22-98)			
Protecting Commercial & Industrial Facilities (A-PAC25-99)			
Adjustable Speed Drives: Problems, Analysis & Solutions (A-PAC31-98)			
Facility and Equipment Grounding-2000 (A-VTGND-00)			
Power & Grounding for Semiconductor, Component Fab (A-VTFAB-00)			
Problems and Solutions for Sensitive Equipment (A-VTESM-00)			
Sale on above programs: \$199 each, 3/\$499, 5/\$799, 10/\$1399!			
Dranetz-BMI PP4300 Operational Skills (A-VT4300) \$395			
Dranetz-BMI 658 PQ Analyzer Operational Skills (A-VT658) \$395			
Dran-View 5.x Operational Skills (A-DVIEW5) \$195	N.A.		
Basic RPM Power Recorder & PC Software Skills (A-PRS100-CD/DVD) \$395	N.A.		
Basic Nexus 1250 Power Meter Op. Skills (A-NX1250-CD/DVD) \$395	N.A.		
Basic Hioki 3196 PQ Analyzer Op. Skills (A-PRS100) \$395	N.A.		
(Add \$5 / tape or disk set for shipping. AZ, CA, IL residents add sales tax)			
Less Multiple Registration/Student Discount (Maximum 10%)			
TOTAL Investment (payable to PowerCET® Corp. with order/at registration)			

AMEX VISA MC Check P.O. Company P.O.# _____

Card Number _____ Card Expiration Date _____

Signature (Req'd for all credit card orders) _____

Billing Address _____

City/State/Zip _____

Telephone _____

COURSE FEES The tuition includes lecture notes (workbook), student materials and refreshments.

COURSE SCHEDULE Classes are held from 8:30 a.m. to 4:30 p.m. each day.

PERSONAL Business casual attire (shirts with collars). No shorts or beach sandals.

DISCOUNTS 10% discount for three or more registrations made concurrently and at least 30 days in advance, from the same firm for the same course or course series.

TERMS Full fee is payable upon registration. Checks or Purchase Orders should be made out to PowerCET® Corporation. American Express, Visa or MasterCard accepted.

CANCELLATIONS Cancellation within 14 days of course date will be assessed a fee of 50% of the course fee to cover expenses. Registrants who do not cancel and do not attend will be assessed the full fee. Cancellations at least two weeks prior to course date will receive a full refund. Substitutions may be made at any time without charge. In the event of a course cancellation, our liability is limited to return of the paid registration fee. We recommend that registrants wait until they receive written confirmation before finalizing travel arrangements.

TRAVEL, MEALS, LODGING Information about local hotels will be included in the student information package. Wherever possible, facilities are selected that have easy access to large shopping malls and restaurants and convenient airport transfer, so rental cars are not essential.

2003

Class Schedule

Orlando, FL		January-February			
27	OP4300	31	PRS100	4	UPS501
28-30	PQ303	3	WF501		

Santa Clara, CA		February			
3-5	PQ303	7	WF501	11-12	MH201
6	OP4300	10	OP3196	13	GND501
6	PRS100	10	PP1-PQ+	14	PSE100

Dallas, TX		March			
17	PRS100	21	OP4300	25	UPS501
18-20	PQ303	24	WF502		

Edison, NJ		April			
2	OP658	3	PP1-PQ+	4	OP4300

Woodbridge, NJ		April			
7-9	PQ303	10	PRS100	11	OP3196

Westbury, NY		April			
10	PQ101**	11	OP1250		

Santa Clara, CA		May			
1	OP658	5-7	PQ303	12	WF502
1	PP1-PQ+	8	OP4300	13	UPS501
2	OP1250	8	PRS100	14	GND501
2	OP3196	9	WF501	15	PSE100

Chicago, IL		May-June			
29	OP1250	5	PRS100	10	GND501
30	OP4300	6	WF501	11	UPS501
2-4	PQ303	9	WF502	12-13	MH201
5	OP3196				

Santa Clara, CA		August			
7	OP658	11-13	PQ303	18	WF502
7	PP1-PQ+	14	OP4300	19	UPS501
8	OP1250	14	PRS100	20	GND501
8	OP3196	15	WF501	21-22	MH201

Edison, NJ		September			
10	OP658	11	PP1-PQ+	12	OP4300

Woodbridge, NJ		September			
15-17	PQ303	18	PRS100	19	OP3196

Westbury, NY		September			
18	PQ101**	19	OP1250		

Chicago, IL		October			
13	OP3196	15	WF501	17	OP1250
14	PRS100	16	WF502	17	OP4300

Long Beach, CA		October-November			
29-31	PQ303	5	WF502	6	UPS501
4	GND501				

POWER QUALITY '03*		Long Beach, CA, 11/2-6			
2	TBA*	3	TBA*		

Chicago, IL		November			
13	OP4300	17	OP1250	18	OP3196
14	PRS100				

Santa Clara, CA		December			
5	OP1250	11	OP4300	15	WF502
5	OP3196	11	PRS100	16-17	MH201
8-10	PQ303	12	WF501		

*For POWER QUALITY '03 classes only:
 Contact: Power Quality Assurance Magazine
 Phone: 800-927-5007 or 203-358-3751

** PQ101 is a 1-day (\$495) version of PQ303

Call PowerCET® at
(408) 988-1346, ext. 101
 or visit our Websites at
www.powercet.com
www.pqtoday.com
 for your education,
 training and consulting needs.
 CAT. PCET-1002