

2010 SWEMA TEXAS METER SCHOOL

Texas A&M Riverside Campus, Bryan, Texas

October 25-29, 2010



Coordinated By:
TEEX Electric Power Training
Infrastructure Training & Safety Institute
Texas Engineering Extension Service
The Texas A&M University System

In Cooperation With:
Southwest Electrical Metering Association



GENERAL INFORMATION

DATE: October 25-29, 2010

LOCATION: Texas A&M Riverside Campus
3100 State Highway 47, Building 6030
Bryan, Texas 77807

AGENDA:

Monday

10:30 a.m. - 1 p.m.	Registration
1 - 1:30 p.m.	General Opening Session
1:30 - 5 p.m.	Sessions

Tuesday

8 a.m. - 5 p.m.	Sessions/Manufacturers & Suppliers Exhibits
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Wednesday

8 a.m. - 5 p.m.	Sessions/Manufacturers & Suppliers Exhibits
11:30 a.m. - 12:30 p.m.	SWEMA & Utility Representatives Business Luncheon
12:30 - 2 p.m.	Managers Visit Vendors/Exhibits

Thursday

8 a.m. - 5 p.m.	Sessions
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Friday

8 a.m. - Noon	Sessions
10 a.m.	Exam
Noon	Adjourn

STUDENT PARTICIPANT FEE: Courses EPP301, EPP303, and EPP305 - **\$235**
Courses EPP307 and EPP310 - **\$260**

CERTIFICATES: Participants with 100% attendance will receive a certificate.

EXHIBITOR SPACE: \$65 per table

MANUFACTURERS/SUPPLIERS FEE:

Exhibitor Fee: \$75 (For **each** representative attending)

Additional Non-SWEMA Member Fee: \$200 (In addition to the \$75 registration fee per person, non-SWEMA exhibitors must pay an additional \$200 per company.)

(Note: Contact SWEMA Treasurer Billy Peel at 469-261-2281 to arrange payment of the non-member fee.)

HOTEL RESERVATIONS:

You can make reservations in College Station at Hyatt Place (\$100 - Call 979-846-9800) and at Hawthorne Suites (\$90 - Call 979-695-9500). Reserved rooms have been set aside under "Meter School - SWEMA." Number of rooms is limited. Discounted rate ends October 3, 2010.

CEU-Accredited Courses

**To register for the
2010 SWEMA Texas Meter School,
visit www.teex.org/meter or call 800-723-3811.**

COURSE INFORMATION

REQUIRED EQUIPMENT:

Scientific calculator required for ALL courses.

For Lab: Class 0 (zero) Rubber Gloves ■ Hardhat ■ Safety Glasses ■ Multimeter (optional)

COURSE 1 - EU-EPP301-5 - INTRODUCTION TO ELECTRICAL METERING - 32 HRS

This course provides essential basic training to individuals entering the electrical metering field. The emphasis is on single-phase applications.

TOPICS

- Electric Power Systems and Basic Meter Math
- Energy/Power Concepts
- Load Characteristics and Lab
- Power Triangle and Vector Concepts
- Meter Theory
- Meter Testing Concepts
- Meter Component Analysis
- Status of AMR/AMI
- Communications and the HAN
- Basics of Meter Safety and Arcing Demo
- Meter Forms and Applications
- Basic Transformer Theory
- Handling Customers with Care

COURSE 2 - EU-EPP303-5 - ADVANCED ELECTRICAL METERING - 32 HRS

This course provides essential training for experienced meter technicians, emphasizing poly-phase and advanced metering applications.

TOPICS

- Review of Electrical Power Concepts
- Distribution Transformer Theory and Metering Applications
- Distribution Transformer Lab
- 4W, 3P Wye Theory and Metering Applications
- 4W, 3P Delta Theory and Metering Applications
- Instrument Transformer Theory, Testing and Metering Applications
- 3W, 1P and 3P Theory and Metering Applications
- Handling Customers with Care

COURSE 3 - EU-EPP305-5 - COMPLEX ELECTRICAL METERING TECHNOLOGY - 32 HRS

This course provides the experienced technician with the latest technological changes and improvements in the metering field.

TOPICS

- Meter Installation Wiring
- Vector Math
- Reference Standards Traceability
- Troubleshooting AMR Devices
- Transformer Loss Compensation
- SCADA Principles
- KYZ Metering
- Field-Testing of Solid-State Meters and Devices
- What You Didn't Know About VAR Metering
- In-Service Testing of Instrument Transformers
- Billing vs. Metering Accuracy
- Grounding
- Integrated Communications
- ANSI Standards
- The Ins and Outs of VAR Flows
- Handling Customers with Care

COURSE 4 - EU-EPP307-5 - NATIONAL GENERATION/TRANSMISSION METERING - 32 HRS

This course provides advanced technicians/metering personnel with enhanced skills and knowledge to strengthen their ability to apply the latest technologies and improvements in the field of advanced and high-voltage metering used in the transmission and generation environments.

TOPICS

- Gross and Net Generation Metering
- Discussion of Deregulated Markets
- Understanding One- and Three-Line Metering Schematics
- Field-Testing Facilities and Solid-State Meters and Devices
- Types of Communications in a Transmission Substation
- Advanced Communications (DNP, MODBUS, TCP-IP, etc.)
- Instrument Transformers
- Understanding Reactive Meter Measurement
- Advanced Transformer and Line Loss Compensation Theory
- Effects of Power Quality on Metering
- Advanced SCADA Principles and SCADA Technology
- Engineering Design for Ring Bus and Breaker-and-a-Half Meter Schemes
- Metering Verification for Ring Bus and Breaker-and-a-Half Meter Schemes
- Safety for High Voltage Substations and Control Rooms

COURSE 5 - EU-EPP310-8 - DIVERSIFIED ELECTRICAL METERING TECHNOLOGY - 32 HRS

Design your own course! *This course provides experienced metering personnel with an opportunity to select training topics to meet their individual training needs. Choose topics you wish to attend from Courses 1, 2, 3, and 4. Limited to the first 25 people who register.*

How to register for Course 5:

1. Call our office or fax your registration form indicating your choice as Course 5. **Phone: 800-723-3811 Fax: 979-458-1426**
2. A list of the available course topics and scheduled times will be faxed to you.
3. Return your choice of topics to our office. We must receive your choices at least two weeks prior to the school in order to prepare a notebook for you.

To register for the 2010 SWEMA Texas Meter School, visit www.teex.org/meter or call 800-723-3811.

CERTIFICATES OF COMPLETION: Certificates are issued to participants with 100% attendance.
(Roll will be taken at random times throughout each day.)

STUDENT REGISTRATION

SWEMA TEXAS METER SCHOOL, OCTOBER 25-29, 2010

MAIL: Customer Care Center
 Infrastructure Training & Safety Institute
 Texas Engineering Extension Service
 301 Tarrow Street
 College Station, Texas 77840-7896

PHONE: 800-SAFE-811 (800-723-3811)
FAX: 979-458-1426
WEBSITE: www.teex.org/meter
E-MAIL: itsi@teexmail.tamu.edu

Please Print Clearly

FEES: School Participant - Courses EPP301, EPP303, and EPP305 - **\$235.**
 Course EPP307 and EPP310 - **\$260.**

SUPERVISOR

Name _____
 Title _____
 Organization _____
 Address _____
 City/State/Zip _____
 Telephone _____ E-mail _____

TEEX STUDENT ID (OR

STUDENT NAME <i>(Print name to appear on certificate.)</i>	FULL SOCIAL SECURITY No.)*	COURSE #	FEE**
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

*Section 7(b) of the Privacy Act of 1974 (5 U.S.C. 552a) requires that when any federal, state or local government agency requests an individual to disclose his or her social security account number (SSN), that individual also must be advised whether that disclosure is mandatory or voluntary, by what statutory or other authority the number is solicited and what uses will be made of it. (Call 800-723-3811 for full privacy statement.)
**Unemployed retirees receive complimentary registration.

TRANSFERS, CANCELLATIONS AND REFUND POLICY

If you cannot attend a class, you MUST contact TEEX in advance to either transfer or cancel your registration. Please refer to the transfer, cancellation, and no-show policy listed below.

Transfers:

- Transfers to another scheduled class (or from one customer to another) are accepted at any time before the start of the class at no charge.
- Customers are encouraged to transfer to a future scheduled class of the same course.
- If the customer cannot transfer to a scheduled class of the same course, then he/she may transfer to another class of a different course and receive either a refund or pay the difference between the two class fees (if applicable).
- If the customer cannot attend any scheduled class, then the Cancellation/Refund Policy is in effect.

Cancellations:

- TEEX will provide a full refund if you cancel 15 or more calendar days before the start of the class.
- Cancellations received 14 calendar days or less before the start of the class will be charged a fee of 10% of the class tuition.
- If TEEX cancels a class, customers will be offered: 1) a transfer to a scheduled class of the same course; 2) a transfer to another class of a different course (customers will receive either a refund or pay the difference between the two class fees, if applicable); or 3) a full refund.

No Shows: Registered participants who do not contact TEEX in advance to cancel their registration and do not attend their scheduled class will be charged the entire class fee.

eLearning/Home Study Courses: Refunds are not available for eLearning or home study courses, nor may the course be transferred from one customer to another.

PAYMENT INFORMATION

Advance registration is required. Payment must accompany registration. Make check, cashier's check or money order payable to Texas Engineering Extension Service.

Arrange payment by one of the following methods:

1. Check*** enclosed – *(Please put course name and date on your check.)*
2. Purchase Order – *(Copy of official company PO must be attached.) If you select method #2, you will receive an invoice from TEEX.*
3. Credit Card

MasterCard VISA American Express Discover **Ad Code: Q10SA1**
 Name on card _____

Administration

Signature _____

*Cut & Shred
 All Below
 Line*

Acct # _____ Expires _____
 CCV# (3-digit number on the back of the card under the signature) _____

NOTE: With few exceptions, you have the right to request, receive, review and correct information about yourself collected using this form.

***By sending your check, please be aware that you are authorizing the Texas Engineering Extension Service (TEEX) to make a one-time electronic debit from your account at the financial institution on your check. This electronic debit will be for the amount of the check; no additional amount will be added to the amount and ALL transactions will remain secure. Please contact TEEX's Financial Services Department at 979-458-6906 to learn about other payment options if you prefer NOT to have your check used in this way. We value your business and appreciate your selecting TEEX for your training needs.

EXHIBITOR REGISTRATION

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MAIL: Customer Care Center
 Infrastructure Training & Safety Institute
 Texas Engineering Extension Service
 301 Tarrow Street
 College Station, Texas 77840-7896

PHONE: 800-SAFE-811 (800-723-3811)
FAX: 979-458-1426
WEBSITE: www.teex.org/meter
E-MAIL: itsi@teexmail.tamu.edu

Please Print Clearly

Contact Name _____ E-mail _____
 Title _____ Organization _____
 Address _____
 City/State/Zip _____
 Phone _____ Fax _____

*Attending exhibitors are responsible for the cost of the Exhibit Table and the registration fee for each table representative.
 Please complete the form below and submit your payment with the registration.*

EXHIBIT SPACE FEE: \$65 per table X _____ (number of tables) = _____ **(A)**
REGISTRATION FEE: \$75 per person X _____ (number of people) = _____ **(B)**
TOTAL FEE (A + B) \$ _____ **(C)**

(Registration and exhibit space fees should be listed above and are payable to TEEEX.)

	TABLE REPRESENTATIVE	E-MAIL
1	_____	_____
2	_____	_____
3	_____	_____

SWEMA MEMBER? Yes No

NON-MEMBER REGISTRATION FEE: \$200 per company

In addition to the \$75 registration fee listed above per person, non-SWEMA exhibitors must pay a \$200 fee per company.
(Note: Contact SWEMA Treasurer Billy Peel at 469-261-2281 to arrange for payment of non-member fee.)

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Arrange payment by one of the following methods:

1. Check* enclosed – *(Please put Meter School 10 Exhibitor and date on your check)*
2. Purchase Order – *(Copy of official company PO must be attached.) If you select method #2, you will receive an invoice from TEEEX.*
3. Credit Card
 - MasterCard VISA American Express Discover

Name on card _____

Administration

Signature _____

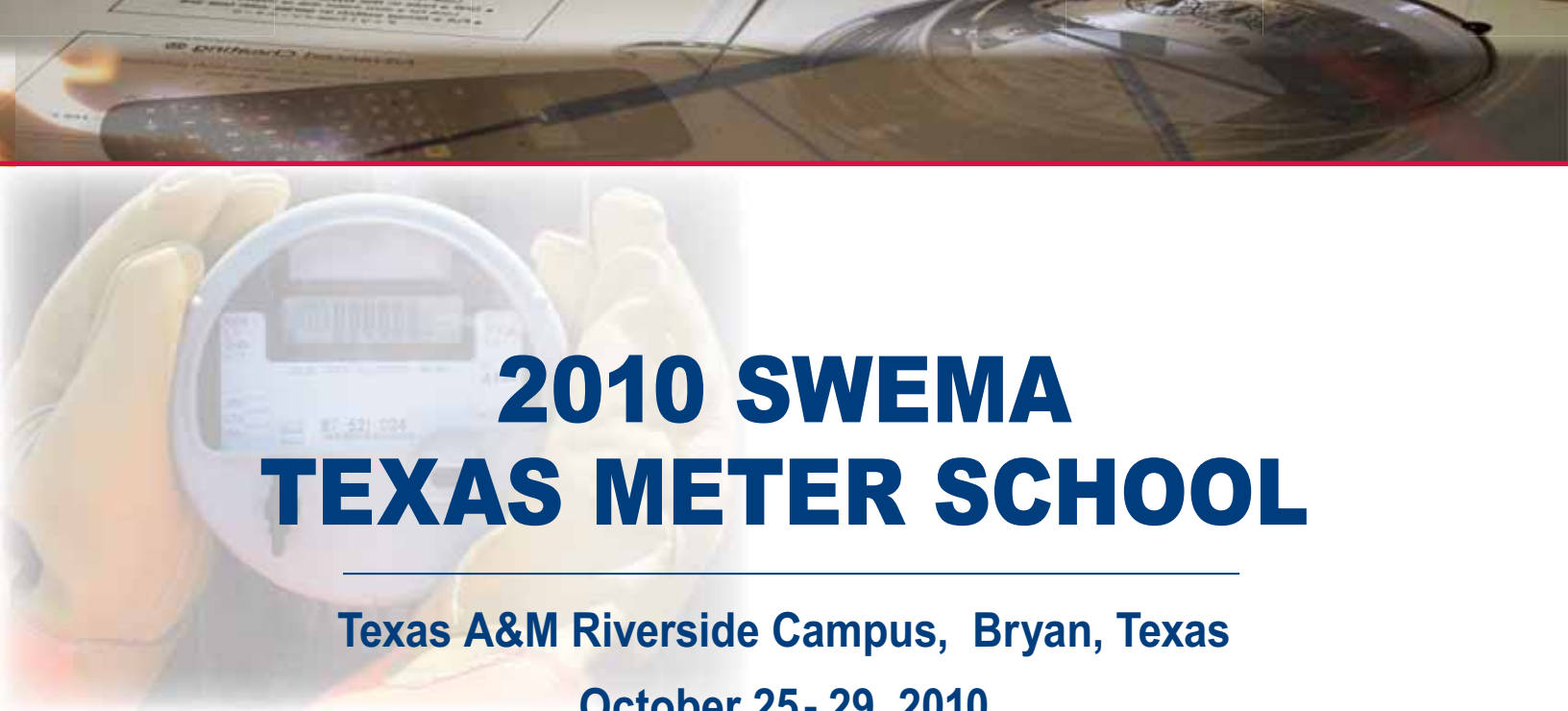
*Cut & Shred
 All Below
 Line*

Acct # _____ Expires _____

CCV# (3-digit number on the back of the card under the signature) _____

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