

EIGHTEENTH ANNUAL

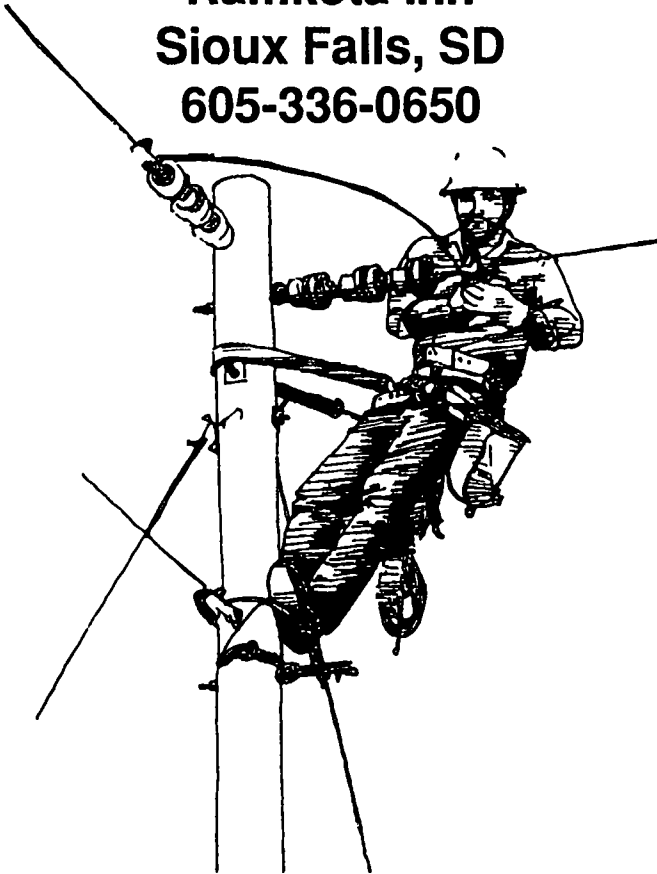
JOINT UTILITY TRAINING SCHOOL

JANUARY 19, 20 & 21, 1993

Ramkota Inn

Sioux Falls, SD

605-336-0650



**Sponsored by
JOINT UTILITY TRAINING COMMITTEE (JUTS)
SOUTH DAKOTA ELECTRICAL COUNCIL**

PROGRAM

SESSIONS PROGRAM INFORMATION

Each session is designed as a 16-hour mini-course. Registration will be for one session only per individual. You will remain in that session for the entire length of the course. Certificates will be sent to your respective company if attendance has been continuous.

REGISTRATION

\$85.00 per person

Pre-Paid Registration will include breakfast on Wednesday and Thursday morning at 6:30 a.m. - 8:00 a.m. in the Exhibit Hall and noon meal on Wednesday in the Exhibit Hall.

Tuesday, January 19, 1993
10:00 a.m. to 12:00 noon

LUNCHEON

Wednesday, January 20, 1993
12:00 noon to 1:00 p.m.

Mini-Courses will be:

Tuesday	1:00 p.m. to 5:00 p.m.
Wednesday	8:00 a.m. to 5:00 p.m.
Thursday	8:00 a.m. to 12:00 noon

SESSION 1-A and SESSION 1-B

SESSION 1-A — Harvest Room

SESSION 1-B — Viking Room

LEADERSHIP SEMINAR

Tuesday, Jan 19, 1 00pm—5 00pm

Wednesday, Jan 20, 8 00am—5 00pm

Thursday, Jan 21, 8 00am—12 00 noon

Description: This session will be taught by two instructors. Each will work with half the participants at one time, then switch to work with the other half. Enrollment is limited to 40 people, 20 in each group.

TITLE: Tools to Handle Those Tough People and Tough Situations

*Controlling difficult situations

*Dealing with tense work situations without losing credibility

*How non-verbal behavior and a person's life history effects leading others

*Improving employee performances and working as a team

*Employee discipline and improving performance

*Becoming more assertive and effective at work

*Fully understanding and managing stress

Instructors: Jim Kellar, Training Associates, Sioux Falls, SD
Suzanne Knudson, Human Relations Training Consultant,
Sioux Falls, SD

Coordinators: James Mergen and Don Seeklander

COURSE LIMITED TO 40 STUDENTS

SESSION II

Exhibit Hall

OCR MAINTENANCE, OVERCURRENT PROTECTION AND LIGHTNING PROTECTION

Part I

Tuesday 1 00 p m - 5 00 p m
Overcurrent Protection

Description: A 4-hour course to assist the attendees in understanding overcurrent coordination and the importance of properly selected and installed lightning protection

Instructors: Chad Carpenter - Border States Electric, Plymouth, MN
Jeff McCammon - Cooper Power Systems,
Minneapolis, MN
Dave Habicht - Border States Electric, Rapid City, SD

Part II

Wednesday, 8 00 a m - 5 00 p m

Description: An 8-hour course on testing, maintaining and operating reclosers

Instructors: Ed Otto and Ed Otto Jr of Ed's Recloser Service
Soloman, KS

Part III

Thursday, 8 00 a m - 12 00 noon

Description: A 4-hour course on Lightning Arrestors and Lightning Protection

Instructors: Chad Carpenter - Border States Electric, Plymouth, MN
Jeff McCammon - Cooper Power Systems,
Minneapolis, MN
Dave Habicht - Border States Electric, Rapid City, SD

Coordinator: Chuck Birkholt and Bruce Brunick

COURSE LIMITED TO 25 STUDENTS

SESSION III

Washington Room

TRANSFORMER CONNECTIONS

A 16-hour workshop designed for apprentice linemen or for experienced linemen and servicemen who are willing to go through a refresher course seeking ideas for communicating and explaining electrical terms and transformer connections to employees who they may supervise. The workshop experience will be valuable to senior linemen who did not have the opportunity to learn the trade at a lineman's school. A pocket calculator would be helpful in determining the anticipated voltage.

Part I

Tuesday, 1 00 p m - 5 00 p m

Description: This session begins with a 2-1/2 hour segment of slides, demonstration, and lecture designed to give line personnel a non-technical, fundamental review of single and three-phase electric power followed with DELTA connections simplified. The remaining portion of the session will involve hands-on experience with miniature equipment including class participation in determining transformer polarity and turns ratio.

Part II

Wednesday, 8 00 a m - 12 00 noon

Description: This session opens with a lecture and demonstration on WYE connections. One hour will then be devoted to hands-on experience with miniature transformers and poles. A lecture will be presented on sequence after which the class will return to construction of miniature transformer banks. Experienced linemen may devote hands-on training time to emergency exercises.

Part III

Wednesday, 1 00 p m - 5 00 p m

Description: VOLTAGE PHASORS (Voltage Vectors) will be the subject of Part 3. The class will do numerous exercises involving voltage phasors and will parallel miniature transformer banks to confirm the accuracy of predicted angular displacement and secondary voltages. It is important that linemen know how to parallel transformer banks so as to not interrupt continuity of electrical service when transferring load from the old to the new transformer bank.

SESSION III-TRANSFORMER CONNECTIONS (CONTINUED)

Part IV

Thursday, 8 00 a m -12 00 noon

Description: Slides/lecture on three-phase power During hands-on experience, the linemen will be involved with trouble shooting and will have the opportunity to solve emergency transformer bank problems

Instructor: Gordon Solee, Engineer Consultant, Fergus Falls, MN

Supervisors: Gordon Solee - Engineer Consultant, Fergus Falls, MN
Clark Hendrickson - NSP, Sioux Falls, SD
Vic Graham - NSP, Sioux Falls, SD
Richard Davis - NWPS, Huron, SD
Dennis Wagner - NWPS, Huron, SD
Daryl Anderson - MDU, Mobridge, SD
George Colombe - East River Electric, Madison, SD

Coordinators: Al Kubousek and Tom Honkomp

16 other credit hours will be given by the State Electrical Commission

COURSE LIMITED TO 48 STUDENTS

SESSION IV

Jefferson Room

Z.E.M.A.R. REGULATOR SCHOOL

Description: Students will be rotated through work stations containing regulators and panels. Regulator types will include General Electric, Allis Chalmers, Siemens Allis, Siemens, and McGraw-Edison. Students get an excellent opportunity to trouble shoot old and new types of controls and learn good trouble shooting techniques which can apply to other types of equipment.

PART I

Tuesday, 1 00 p m - 5 00 p m

TITLE: Theory and Operation

PART II

Wednesday, 8 00 a m - 12 00 noon

TITLE: Application and Accessories

PART III

Wednesday, 1 00 p m - 5 00 p m

TITLE: Electronics and Trouble Shooting Procedures

PART IV

Thursday, 8 00 a m - 12 00 noon

TITLE: Hands-on Trouble Shooting and Questions and Evaluation

Instructor: Joe Robb, Z E M A R Regulator School, McConnelsville, OH

Coordinators: Bob Crawford and Richard "Slim" Rutschke

16 other credit hours will be given by the State Electrical Commission

COURSE LIMITED TO 24 STUDENTS

SESSION V-A

Lincoln Room

ELECTRIC METERING

PART I

Tuesday, 1 00 p m - 5 00 p m
Wednesday, 8 00 a m - 5 00 p m

TITLE: Basic Metering

Description: A 16-hour course designed for linemen or apprentice metermen with little or no metering experience. The course will cover fundamentals of a watt hour meter, name plate and register information, determining multipliers, selection of meters and sockets per installations, and review of CT and PT applications. Included in this course will be fundamentals, performance, programming, and software of electronic and 100% solid state meters.

Each student is required to bring to the course a meter any type of meter will work, i e , single or polyphase (three phase), old or new.

PART II

Thursday, 8 00 a m - 12 00 noon

Instructors: Garry January - ABB, Raleigh, NC
Tom Polk - ABB, Omaha, NE
Greg May - May Engineering, Sioux Falls, SD
Brian Ulven - WESCO, Sioux City, IA
Greg Guggenmos - WESCO, Sioux City, IA

Coordinator: Ken Wetz

16 other credit hours will be given by the State Electrical Commission.

SESSION V- B

Roosevelt Room

ELECTRIC METERING

Tuesday, 1 00 p m - 5 00 p m

Wednesday, 8 00 a m - 5 00 p m

Thursday, 8 00 a m - 12 00 noon

TITLE: Advanced Metering

Description: A 16-hour course designed for metermen or individuals with a previous metering background

The course will cover:

Common metering questions for billing applications
Rr-Kr-Rs Primary Reading vs Secondary Reading
Instrument Transformer Thermal Rating Factor
Accuracy Issues Associated with Meter Curves
History of Metering Configurations
Billing Methods Today (Pros/Cons)
Meter Technology to Include Rolling Block
Interval vs Block Internal
Solid State vs Electro-Mechanical Meters
User Friendliness of Software
Harmonics Issue
Solid State Registers and Multipliers
First Level Multifunction Metering (Hands-on)
High Level Multifunction Metering to Include
Substation, Industrial, Commercial
Economic Justification for Multifunction Meters and Retrofits

Instructors: Tom Johnson - G E , Mpls , MN
Mike White - G E , Mpls , MN
Mike Crane - G E , Mpls , MN
Greg May - May Engineering, Sioux Falls, SD
Kent Fischer - Plainsco, Sioux Falls, SD
Jim Shields - Plainsco, Sioux Falls, SD

Coordinator: Larry Brink

16 other credit hours will be given by the State Electrical Commissio

SESSION VI

Amphitheater II

ENGINEERING

PART I

Tuesday, 1 00 p m -2 00 p m

TITLE: Ground Testing Procedures

Description: Verifying the integrity of your ground system

Instructor: Ron Globke, Turner-Hutchinson Electric, Marion, SD

PART II

Tuesday, 2 00 p m -5 00 p m

TITLE: Power Quality

Description: This session will help you identify causes of sags, surges and harmonics in the power system

Instructor: Jeff Rose, Rochester Instrument Systems,
Rochester, NY

PART III

Wednesday, 8 00 a m -5 00 p m

TITLE: Power Quality

Description: This session will help you identify power quality problems and show you ways you can correct them

Instructor: To be announced

Session VI - Engineering (continued)

PART IV

Thursday, 8 00 a m -12 00 noon

TITLE: System Protection and Sectionalizing

Description: This session covers construction, maintenance and operation of overhead and underground systems

Instructor: David H DeVries, Consulting Engineer,
DeWild, Grant, Reckert & Associates Co
Rock Rapids, IA

SESSION VII

Amphitheater I

OPERATIONS AND SAFETY

Part I

Tuesday, 1 00 a m - 5 00 p m

TITLE: Burn Management At the Scene

Instructors: Marla DeVaney, Burn Coordinator
Julie Benz, Physical Therapist
McKenna Hospital, Sioux Falls, SD

TITLE: One Persons Lifelong Experience From an Electric Injury

Instructor: Sheldon Jensen - Turner Hutchinson Electric, Marion, SD

PART II

Wednesday, 8 00 a m - 12 00 noon

TITLE: Synthetic Sling Seminar - Use, Care, Maintenance

Description: Morning session is the sling user class. General information, mechanical and environmental factors, and sling inspection are fully covered and explained. This class is strictly generic in nature. This session offered to outside people for a fee of \$25.00. This is only for this session.

Wednesday, 1 00 p m - 5 00 p m

TITLE: The Designated Inspector Class.

Description: This specialized session requires as a prerequisite, participation in the sling user class. This class includes all areas of sling inspection: basic materials, sling designs, sling damage (cause/effect), inspection techniques and record keeping.

Instructor: Michael Gelsky, President of Lift It Manufacturing Co., Inc., Los Angeles, CA

Part III

Thursday, 8 00 a m - 12 00 noon

TITLE: Chain Saw Safety

Description: This course covers safety concerns, chain saw functions and maintenance, cause/effect and prevention of kickback and protective equipment

Instructor: Alex Bildeaux Jr - Tilton Equipment Co , St Paul, MN

Coordinators: Jim Lewis and Don Hook

COURSE LIMITED TO 40 STUDENTS

SESSION VIII

Back Dorchester

CUSTOMER RELATIONS

Tuesday, 1 00 p m -5 00 p m

Wednesday, 8 00 a m -5 00 p m

Thursday, 8 00 a m -12 00 noon

This class consists of hands-on training on how to deal with other people. It is specifically designed to deal with utility customers but will also help the participant communicate with spouse, children, and people in general.

It is a hands-on practice-type training class put together by Kaset, Inc. It is applicable to all classifications of employees but most helpful to those dealing directly one-to-one with customers.

Instructor: Black Hills Power & Light, Rapid City, SD

Coordinator: Juell Chapman

COURSE LIMITED TO 20 PEOPLE

SESSION IX

Crystal Room

NATIONAL ELECTRIC SAFETY CODE

Tuesday, 1 00 p m - 5 00 p m Part 1 & 2

Wednesday, 8 00 a m - 5 00 p m Part 3, 4, & 5

Thursday, 8 00 a m - 12 00 noon Part 6 & 7

Description: The purpose of this class is to teach electric distribution personnel how to use the NESC book and some of the things to look for on their existing system This class is distribution oriented Lectures, practice exercises, videos and practical application slides are used to make this a multimedia course

STUDENTS MUST BRING A CURRENT NESC BOOK WITH THEM.

The class is broken into 7 parts

1 What is the NESC	Sections 10-17
2 Grounding Methods	Sections 90-99
3 Electric Supply Stations	Sections 100-193
4 Development of Overhead Lines	
5 Overhead Lines	Sections 200-279
6 Underground Lines	Sections 300-391
7 Work Rules	Sections 400-446

Instructor: Willy Haufschild - Montana-Dakota Utilities Company
Mobridge, SD

Coordinator: Willy Haufschild

4 other credit hours will be given by the South Dakota Electrical Commission

COURSE LIMITED TO 22 PEOPLE

**18th Annual
Joint Utility Training School
January 19, 20 & 21, 1993
Ramkota Inn - Sioux Falls, SD**

**REGISTRATION FEE
is \$85.00 per student - PREPAID**

I	LEADERSHIP SEMINAR-	- 40 Maximum
	I-A	
	I-B	
II	OCR MAINTENANCE, OVERCURRENT PROTECTION & LIGHTNING PROTECTION	-25 Maximum
III	TRANSFORMER CONNECTIONS	- 48 Maximum
IV	Z E M A R	-24 Maximum
V	ELECTRIC METERING	
	V-A	
	V-B	
VI	ENGINEERING	
VII	OPERATIONS SAFETY	- 40 Maximum
VIII	CUSTOMER RELATIONS	- 20 Maximum
IX	NATIONAL ELECTRIC SAFETY CODE	- 22 Maximum

Some sessions have limited enrollment, so make your reservations **as soon as possible**

Please submit this form with payment. Make checks payable to Joint Utility Training School. Refunds and changes in registration will be allowed to January 4th. Send check and registration form to South Dakota Rural Electric Association, ATTN Dawn Smart, PO Box 1138, Pierre, SD 57501-1138

258 Registered

Joint Utility Training Committee

Chairman.

Ken Wetz, Butte Electric, Newell, SD

Vice-Chairman.

Dean Greer, Northern States Power Co , Sioux Falls, SD

Secretary.

Don Seeklander, City of Estelline, Estelline, SD

Treasurer.

Randy Dickerson, South Dakota Rural Electric Association, Pierre, SD

South Dakota Electrical Council.

Pete Swanson (liaison) Watertown Municipal Utilities, Watertown, SD

JUTS Members

South Dakota Rural Electric Association.

Charles W Birkhoff, Cam Wal Electric, Selby, SD

Ken Wetz, Butte Electric, Newell, SD

Juell Chapman, Grand Electric, Bison, SD

Larry Brink, Beadle Electric, Huron, SD

Investor-Owned Electric Utilities.

Al Kubousek, Otter Tail Power Company, Milbank, SD

Robert Crawford, Northwestern Public Service, Huron, SD

Willy Hauschild, Montana-Dakota Utilities Co , Mobndge, SD

Dean Greer, Northern States Power Company, Sioux Falls, SD

Stuart Wevik, Black Hills Power and Light, Rapid City, SD

Municipal Electric Utilities.

Tom Honkomp, Brookings Municipal Utilities, Brookings, SD

Jim Mergen, Sioux Falls Light Department, Sioux Falls, SD

Bruce Brunick, City of Vermillion, Vermillion, SD

Don Seeklander, City of Estelline, Estelline, SD

Todd Chambers, City of Pierre, Pierre, SD

Generation, Transmission, Political Subdistricts, Statewide Association.

Jim Lewis, South Dakota Rural Electric Association, Pierre, SD

Slim Rutschke, South Dakota Rural Electric Association, Pierre, SD

Randy Dickerson, South Dakota Rural Electric Association, Pierre, SD

Don Hook, East River Electric Power Cooperative, Madison, SD

Rodney Gunn, West River Electric, Rapid City, SD

