

# Bishop Forensic Engineering, LLC



**Tony Bishop, P.E., CFEL, CFVI**  
*Senior Electrical Engineer / Owner*

2847 Laverne Rd,  
Nesbit, MS 38651  
901-490-4631

## **EDUCATION:**

1977 graduate of the University of Memphis  
Memphis, Tennessee  
Bachelor of Science Electrical Engineering

## **ADDITIONAL EDUCATION:**

Completed 12 hours course credit toward a Master of Science with emphasis in Electrical Engineering at the University of Memphis.

## **EMPLOYMENT:**

Bishop Forensic Engineering, LLC  
March 2012, Present

Responsibilities include the evaluation of failures and malfunctions of electrical systems resulting in loss or injury. These include appliances, vehicles, low and high voltage systems, electric distribution equipment, residential, commercial and industrial wiring systems, communication systems, generators, motors, motor controls, and HVAC equipment.

Electrical fire cause evaluations include the following: residential, commercial, industrial, marina, personal vehicle, commercial vehicle, and recreational vehicle fires.

Evaluations of lightning strike protection systems and lightning strike evaluations are also performed.

Additional expertise includes replacement cost estimation, depreciation analysis, project management, large scale computer software and hardware installations, and contract negotiations.

Unified Investigations & Sciences, Inc.  
Memphis, Tennessee  
Forensic Engineer  
2006 to March 2012

Responsibilities included the evaluation of failures and malfunctions of electrical systems resulting in loss or injury. These include appliances, vehicles, low and high voltage systems, electric distribution equipment, residential, commercial and industrial wiring systems, communication systems, generators, motors, motor controls, and HVAC equipment.

Independent Electrical Design Service  
Nesbit, Mississippi  
Owner/Designer  
1999-2006

Mr. Bishop served as an independent contractor that provided electrical system designs for new and renovated commercial buildings for construction projects.

Memphis Light, Gas & Water  
Memphis, Tennessee  
Project Engineer, System Development Manager, Project  
Manager/CIS, Project Manager/Customer Engineering  
1977-2004

Mr. Bishop completed a full and progressive career at one of the largest three service utilities in the nation. During his career responsibilities included planning and coordinating large electric, gas, and water projects in the substation, transmission, and distribution areas. His assignments and responsibilities also included the design and installation of utility systems and services.

Special assignments included outage analysis and post assessment of two system wide restoration efforts that resulted from ice and windstorms during his career. Mr. Bishop also was responsible for an effort that re-engineered the company's design and cost estimating methods.

As project manager, Mr. Bishop was responsible for the evaluation and implementation of a new computing infrastructure throughout the company. New technologies were implemented that provided data radio networks, real time dispatching, industrial power billing, and customer information.

Dover Elevator  
Memphis, Tennessee  
Electrical Designer  
1977-1978

Designed electrical control systems for elevators installed in high rise buildings.

**PROFESSIONAL  
ORGANIZATIONS:**

Institute of Electrical and Electronics Engineers (IEEE)  
International Association of Arson Investigators (IAAI)  
National Fire Protection Association (NFPA)  
Society of Automotive Engineers (SAE)  
Engineers Club of Memphis

**LICENSES AND REGISTRATIONS:**

Alabama	- Registration number 28592
Arkansas	- Registration number 12679
Florida	- Registration number 66172
Georgia	- Registration number 32087
Kentucky	- Registration number 25238
Louisiana	- Registration number 33092
Michigan	- Registration number 6201054364
Mississippi	- Registration number 14485
Missouri	- Registration number 2007011060
Montana	- Registration number 18903
Ohio	- Registration number 72109
South Carolina	- Registration number 28723
Tennessee	- Registration number 102809
Texas	- Registration number 100718
Wisconsin	- Registration number 39235-6
Kansas	- Registration number 19705
Idaho	- Registration number 13101
Illinois	- Registration number 062-060590
Oklahoma	- Registration number 23038
Washington	- Registration number 44089
West Virginia	- Registration number 17496

## **PUBLICATIONS AND PRESENTATIONS**

- No publications
- IAAI-Arkansas Chapter – Presented 1.5 hour course re: “Arc Mapping Structures and Vehicles - Lecture”, 10/27/2016
- IAAI-Arkansas Chapter – Presented 1.0 hour course re: “Burn Cells and Vehicle Fires – Arc Mapping - Demonstration”, 10/27/2016
- IAAI-Mississippi Chapter – Presented 2.5 hour course re: “Fundamentals of Electricity, Residential Branch Circuits, Protective Devices, Grounding and Bonding Intro”, 07/24/2014
- IAAI-Arkansas Chapter – Presented 3 hour course re: “Fundamentals of Electricity, Overhead Residential Services / Home Power Delivery, and Residential Branch Circuits”, 10/7/2011
- Tennessee Claims Association – Presented “Electrical Surges and Evaluation of Surge Related Losses”, 04/26/2011
- Chartis Insurance Company, Instructed “Evaluation of Lightning Related Losses”, 10/6/2009
- Nationwide Insurance Company, Instructed “Electrical Fire Causes”, 9/13/2007
- Memphis Engineer’s Club, Instructed “Forensic Engineering Seminar”, 08/27/2007
- Tennessee Claims Association, Instructed “Forensic Engineering Seminar”, Memphis, Tennessee, 4/15/2007
- Field Force Automation, Mobile Dispatch Implementation feature article, Memphis, TN, 8/15/2003
- Memphis Engineer’s Club, Presented “The Banner CIS Project”, 07/21/2003
- American Public Power Association, Presented “Banner CIS”, 09/22/2004
- Memphis Business Journal, Pen Based Computing Project feature article, 7/31/1992
- The Wall Street Journal, Pen Based Computing Project feature article, 6/1/1992

## **SPECIALIZED TRAINING:**

- Sexual Harassment Prevention Training – Ethics required for all IL PE’s, 09/29/2023, 1 hour, Tested.
- International Fire Code Essentials-Special Processes and Building Uses, 09/28/2023, 2 hours, Tested.
- Fuel & Combustion Systems Safety: Controlling Combustion Risks: Equipment, 09/26/2023, 1 hour, Tested.
- Combustion Analysis, 09/26/2023, 1 hour, Tested.
- Substations – Volume VI: Voltage Regulators and Capacitors, 09/20/2023, 3 hours, Tested.
- Existing Building Commissioning: Implementing Retrocommissioning, 09/20/2023, 1 hour, Tested.
- Transformer 2 – Standards, 09/18/2023, 2 hours, Tested.
- Transformer 1 – Electrical Characteristics, 09/17/2023, 1 hour, Tested.
- Transmission & Distribution: Overhead Distribution Systems, 09/05/2023, 1 hour, Tested.
- 2020 NEC Changes: Overvoltage and Grounding & Bonding, 09/05/2023, 1 hour, Tested.
- PDH Library – Online, Florida Laws and Rules, 02/16/2023, 1 hour, Tested
- RedVector, Protecting Your Communications System from Transients and Surges, 12/12/2022, 1 hour, Tested.
- RedVector, Ethics for Professionals, 12/12/2022, 1 hour, Tested.
- RedVector, Generating Electricity, 12/9/2022, 1 hour, Tested,
- AR IAAI, Lab Analysis of Fire Debris; Fire Deaths, 04/29/2022, 4 hours, Tested
- AR IAAI, Changes to NFPA 921, 1033, and 1321, 04/28/2022, 8 hours, Tested
- RedVector, Understanding Fire Sprinkler Drawings & Calculations, 9/27/2021, 1 hour Tested
- RedVector, Overcurrent Protection I, 9/25/2021, 3 hours, Tested
- RedVector, Small Scale and Micro Scale Wind Applications, 9/18/2021, 2 hours, Tested

- RedVector, Cogeneration System Essentials, 9/18/2021, 1 hour, Tested
- RedVector, Lighting Control Essentials, 2 hours, Tested
- IAAI CFI Trainer.net, Lithium-Ion Battery Failure, 06/10/2021, 1 hour, Tested
- RedVector, Transformers III-Connections, 06/08/2021, 2 hours, Tested
- RedVector, Underground Residential Distribution (URD) Systems,03/31/2021, 1 hour, Tested
- RedVector, The Ethics of Green Design, 03/31/2021, 1 hour, Tested
- RedVector, Florida Laws & Rules, 02/24/2021, 1 hour, Tested
- RedVector, Electrical Work for Florida Pool Contractors, 12/23/2021, 1 hour, Tested
- RedVector, Microgrids and the City, 11/5/2020, 1 hour, Tested
- Goodson Engineering, Hot Surface Ignition, 10/22/2020, .75 hours
- RedVector, Uninterruptible Power Supply System Efficiency, 9/15/2020, 1 hour, Tested
- RedVector, Emergency Electric Power, 9/15/2020, 2 hours, Tested
- RedVector, Electrical Wiring Methods; 9/14/2020, 2 hours, Tested
- RedVector, Emergency Electrical Power; 9/15/2020, 2 hours, Tested
- RedVector, Uninterruptible Power Supply System Efficiency, 1 hour, Tested
- RedVector, Asset Condition Management: Motor Testing, 3/13/2020, 1 hour, Tested
- RedVector, A Professional Engineer's Standard of Care, 3/3/2020, 1 hour, Tested
- RedVector, Instrumentation and Control: Process Control, 3/2/2020, 2 hours, Tested
- OSHAcademy, Asbestos Safety, 1/6//2020, 3 hours, Tested
- RedVector, Respirator Protection, 1/5/2020, .5 hour, Tested
- RedVector, Asbestos Awareness in General Industry, 1/5/2020, .5 hour, Tested
- RedVector, Commercial Application Transformers, 09/24/2019, 1 hour, Tested
- IAAI CFITrainer.net, Fire Chemistry, 09/23/2019, 3 hours, Tested
- IAAI CFITrainer.net, Thermometry Heat and Heat Transfer, 09/23/2019, 3 hours, Tested

- RedVector, Commercial Electrical Systems Essentials, 09/22/2019, 1 hour, Tested
- RedVector, Transmission and Distribution: Overhead Distribution Systems, 09/19/19, 1 hour, Tested
- RedVector, Essentials of the Connected Vehicle, 09/16/2019, 1 hour, Tested
- RedVector, Reliability Engineering Essentials, 09/13/2019. 1 hour, Tested
- RedVector, Phasors and AC Circuit Analysis. 09/12/19, 2 hours, Tested
- RedVector, Transmission and Distribution: Service Installation, 09/09/19, 1 hour, Tested
- RedVector, Laws and Rules for Florida Engineers, 02/24/2019, 1 hour, Tested
- RedVector, Fire Alarm Essentials, 08/21/2018, 2 hours, Tested
- PDHengineering – Engineering Ethics: the Fukushima Nuclear Plant Disaster, 07/26/2018, 1 hour, Tested
- Forensic Investigation Group – Kirk’s Fire Investigation, Eighth Edition, 07/24/2018, 8 contact hours; Taught by Dr. David Icove, P.E. and Attorney Thomas May
- RedVector, 2017 NEC Changes: Branch Circuits, Feeders & Services, 04/24/2018, 2 hours, Tested
- RedVector, Electric Motors, 04/28/2018, 1 hour, Tested
- RedVector, Ethical Decision Making for Engineers #4, 03/29/2018, 1 hour, Tested
- NFPA, 2015 NFPA 70E: Standard for Electrical Safety in the Workplace, 09/21/2017, 6 hours - Tested
- RedVector, 2017 NEC Changes: Hazardous Locations, 07/28/2017, 1 hour - Tested
- Florida PE Update: Laws and Regulations Governing FL PE’s, 02/18/2017, 1 hours
- AR IAAI by Andy Asbell, “Investigating Vehicle Fires”, 10/27/2016, 2.0 hours
- AR IAAI by Gary VanderMolen, “Investigating Agricultural Equipment Fires”, 10/28/2016,1.5 hours
- AR IAAI by Phil Noah, “Investigating Fire Place Fires, 10/28/2016,1.5 hours
- AR IAAI by Steve Johnson, Investigation by the Numbers, 04/29/2016, 1.5 hours
- AR, IAAI by Doug Smith, Fire Investigations Case Studies, 04/29/2016, 1.5 hours

- AR, IAAI by Warren Newman/ATF, Post Blast Investigations and Demos, 04/28/2016, 7 hours
- Cozen O'Connor, Lithium Batteries and Subrogation, 03/31/2016, 1 hour
- RedVector, Ethical Decision Making for Engineers #2, 03/07/2016, 1 hour - Tested
- NFPA 921, Fire chemistry, Vehicle Fire Dynamics, Safety, Mechanical systems – NAFI CFVI Lexington Conference, September 2015, 6 hours tested
- Vehicle Fire Safety Standards, Electrical Systems, Documenting the Fire, Origin, Cause, Fuel Fed Fires – NAFI CFVI Lexington Conference, September 2015, 7.5 hours - Tested
- Live burn of 3 vehicles, Examination and Evaluation of 15 burned vehicles – NAFI CFVI Lexington Conference, September 2015, 7 hours - Tested
- Black Box Data Retrieval, Sources of Information, Vehicle Arson, Seminar Discussion– NAFI CFVI Lexington Conference, September 2015, 4 hours - Tested
- Florida Engineers Laws and rules, PacePDH.com, February 27, 2015, 4 hours
- Louisiana Laws and Rules and Engineering Professionalism and Ethics, Louisiana State Web Site, October 29, 2014, 2 hours.
- Fire cause and live burn seminar – Rimkus Consulting, Hattiesburg, Mississippi, November 12, 2014, 7 hours.
- Digital Documentation for Fire Investigations – IAAI Arkansas Chapter Conference, October 2014, 7 hours.
- Cellulose Insulation & HT Chimneys – IAAI Arkansas Chapter Conference, October 2014, 1 hour.
- Electrical Appliance Fires – IAAI Arkansas Chapter Conference e, October 2014, 2 hours.
- Commercial Building MEP Design – RedVector.com, June 2014, 1 hour- Tested
- Electric Fire Alarm Systems – RedVector.com, June 2014, 1 hour - Tested
- Battery Applications - RedVector.com, June 2014, 3 hours - Tested
- Building Systems for Designers: Elec. Appliances & Comm. Equip - RedVector.com, June 2014, 1 hour - Tested
- Texas Board of Engineering Laws and Rules – discountphd.com, March 2014, 1 hour - Tested



- Dynamics of Fire Investigations – NAFI Charlotte Conference, March 2013, 1.25 hours - Tested
- NFPA 921 and 1033– NAFI Charlotte Conference, March 2013, 1 hour - Tested
- Fire Chemistry & Fire Dynamics – NAFI Charlotte Conference, March 2013, 3.5 hours - Tested
- Fire Dynamics and Pattern Analysis – NAFI Charlotte Conference, March 2013, 4 hours - Tested
- Heat and Flame Vector Analysis – NAFI Charlotte Conference, March 2013, 1 hours - Tested
- Processing the Fire & Explosion Scene: Photography & Diagramming – NAFI Charlotte Conference, March 2013, 2.5 hours - Tested
- Determining the (fire) Origin – NAFI Charlotte Conference, March 2013, 2 hours - Tested
- Determining Cause & Responsibility – NAFI Charlotte Conference, March 2013, 1.5 hours - Tested
- Legal Considerations - – NAFI Charlotte Conference, March 2013, 2 hours - Tested
- Fire case studies – NAFI Charlotte Conference, March 2013, 1.5 hours - Tested
- Building Construction – NAFI Charlotte Conference, March 2013, 1.75 hours - Tested
- Electricity for Fire Investigations & Ignition Sources – NAFI Charlotte Conference, March 2013, 2 hours - Tested
- Engineer Educators, Inc. – Grounding and Bonding Electrical Systems, February 2013, 4 hours - Tested
- Engineer Educators, Inc. – Florida Law and Rules 2011-2013, February 2013, 4 hours - Tested
- IAAI Arkansas - Electrical Fires, CSST Fires, NFPA 921 changes, Multi-Discipline Fire Investigations, 2012 Fall Seminar, Eureka Springs, AR, September 2012, 12 hours, - Tested
- EFI Global – Course 12138 Basic Fire Science including: Fire Science, Electrical Fires, Chemical Analysis, and Four live compartment fire burns., September 14, 2012, 6 hours
- RedVector – Ethical Decision Making for Engineers #4, March 2012, 1 hour, - Tested
- IAAI CFITrainer.Net – Fire Investigator Scene Safety, December 2011, 3 hours, - Tested

- RedVector – Ethical Decision Making for Engineers #3, February 2011, 1 hour, - Tested
- RedVector – Florida Laws and Rules, February 2011, 4 hours, - Tested
- RedVector – Arc Flash Hazard Analysis, February 2011, 1 hour - Tested
- RedVector – 2011 NEC Changes Article 90-110, February 2011, 1 hour - Tested
- RedVector – 2011 NEC Changes Article 200-280, February 2011, 2 hours - Tested
- Mississippi Fire Investigators Association – Electrical Fire Causation, 2010 Fall Seminar, Natchez, MS, October 2010, 20 hours, - Tested
- IAAI Arkansas - Electrical Fires and Fire Testing, 2010 Spring Seminar, Hot Springs, AR, April 2010, 12 hours, - Tested
- PDHOnline, Engineering Ethics, 9/21/2009, 1 hour
- IAAI Arkansas – Electrical Engineering Relating to Fire Investigations, 4/17/2009, 12 hours
- IAAI Louisiana Recreational Vehicle Fires, , 7/25/2008, 8 hours
- NFPA, National Electrical Code, 5/12/2008, 24 hours
- PDHEngineering, Circuit Control Devices, 12/27/2007, 3 hours - Tested
- PDHEngineering, AC Motors and Generators, 9/29/2007, 4 hours – Tested
- Insurance Industry Training, Structure Fires, Nationwide Memphis, 9/13/2007, 4 hours
- Unified Investigations & Sciences, Inc., Orientation, Forensic Investigations and the Insurance Industry, UIS Dallas, Jan 2007, 40 hours
- Memphis Engineer’s Club, A Comparison Between Ductile Iron and Plastic, Memphis Engineer's Club, 12/18/2006, 1 hour
- RedVector, Electric Ground Protection, 12/04/2006, 2 hours - Tested
- Unified Investigations & Sciences – Inc, Forensic Engineering, 11/13/2006, 40 hours
- PDHEngineering, Failure Appraisalment, 11/11/2006, 2 hours - Tested
- PDHEngineering, Engineering Ethics, 11/11/2006, 1 hour
- Memphis Engineer's Club, Storm Water Quality, Memphis Engineer's Club, 9/11/2006, 1 hour

- Memphis Engineer's Club, Building Network Substations, Memphis Engineer's Club, 8/14/2006, 1 hour
- Memphis Engineer's Club, Soil Stabilization Utilizing Urethane Foam, Memphis Engineer's Club, 7/31/2006, 1 hour
- Memphis Engineer's Club, Engineering Implications for Homeland Security, Memphis Engineer's Club, 5/22/2006, 1 hour
- Memphis Engineer's Club, Memphis Aquifers: A vital Source for Groundwater, Memphis Engineer's Club, 4/24/2006, 1 hour
- Memphis Engineer's Club, A New Concrete Reinforcing Material, Memphis Engineer's Club, 3/20/2006, 1 hour
- Memphis Engineer's Club, Design Construction of the Walnut Grove/Humphreys Boulevard Interchange, Memphis Engineer's Club, 2/27/2006, 1 hour
- Memphis Engineer's Club, The role of the Engineer in Urban Search and Rescue, Memphis Engineer's Club, 12/12/2005, 1 hour
- RedVector, Economic conductor Selection, RedVector.com, 12/8/2005, 1 hour
- Memphis Engineer's Club, Modern Electronic controls in the Food Processing Industry, Memphis Engineer's Club, 11/7/2005, 1 hour
- Memphis Engineer's Club, Developments in Highway Safety, Memphis Engineer's Club, 10/24/2005, 1 hour
- Memphis Engineer's Club, Engineering Ethics and Professionalism, Memphis Engineer's Club, 10/3/2005, 1 hour
- Memphis Engineer's Club, Developing Successful urban 1st and 2nd order streams, Memphis Engineer's Club, 8/8/2005, 1 hour
- Memphis Engineer's Club, Geotechnical Aspects of Levee Stability, Memphis Engineer's Club, 8/1/2005, 1 hour
- Memphis Engineer's Club, Design and Construction Issues for Widening the Panama Canal, Memphis Engineer's Club, 7/18/2005, 1 hour
- Memphis Engineer's Club, Management Challenges, 164th Airlift Wing Relocation, Memphis Engineer's Club, 5/16/2005, 1 hour
- Memphis Engineer's Club, Off Shore Outsourcing - Engineering Design, Memphis Engineer's Club, 4/15/2005, 1 hour

- Memphis Engineer's Club, Recent Developments in Nuclear Power, Memphis Engineer's Club, 3/28/2005, 1 hour
- Memphis Engineer's Club, Quality Control of Design Documents, Memphis Engineer's Club, 1/24/2005, 1 hour
- Memphis Engineer's Club, Green Power, Memphis Engineer's Club, 11/29/2004, 1 hour
- Memphis Engineer's Club, Future of Building Systems in Memphis & Shelby County, Memphis Engineer's Club, 11/22/2004, 1 hour
- Memphis Engineer's Club, Concrete Pavement Repairs, Memphis Engineer's Club, 7/26/2004, 1 hour
- Memphis Engineer's Club, Pavement Design 101, Memphis Engineer's Club, 7/12/2004, 1 hour
- Memphis Engineer's Club, Crane Safety with Emphasis on Site Preparation, Equipment & Operator Qualifications, Memphis Engineer's Club, 5/24/2004, 1 hour
- Memphis Engineer's Club, FEMI Structural Evaluation of Seven Arkansas Schools, Memphis Engineer's Club, 1/26/2004, 1 hour
- Memphis Light, Gas & Water, 20003 Memphis Windstorm Assessment, Memphis, Ten., 1/9/2004, 3 month task force
- Memphis Light, Gas & Water, Substation design and power reliability, 2003 MLGW Engineering Seminar, 12/3/2003, 7 hours
- Memphis Engineer's Club, Power Factor correction, Memphis Engineer's Club, 12/1/2003, 1 hour
- Memphis Engineer's Club, Seismic Retrofit of the Hernando Desoto Bridge, Memphis Engineer's Club, 11/17/2003, 1 hour
- Memphis Engineer's Club, Detailed Changes Required in Design Under The IBC 2003 Building Code and The Cost Implications, Memphis Engineer's Club, 11/3/2003, 1 hour,
- Memphis Engineer's Club, Seismic Hazards in the New Madrid Zone , Memphis Engineer's Club, 10/20/2003, 1 hour
- Memphis Engineer's Club, Research done by the U of M's Center for Earthquake Research and the Science on which the IBC 2003 Code is Based, Memphis Engineer's Club, 10/13/2003, 1 hour
- Memphis Engineer's Club, Response of the Structural Systems of the Pentagon to the 9/11 Plane Crash, Memphis Engineer's Club, 8/11/2003, 1 hour

- Memphis Engineer's Club, The Fuzzy Logic of Lighting Design, Memphis Engineer's Club, 2/24/2003, 1 hour
- Memphis Engineer's Club, Use of Geotextile Fabrics for Erosion Control, Memphis Engineer's Club, 12/16/2002, 1 hour
- Memphis Light, Gas & Water, Engineering ethics and leadership, 2002 MLGW Engineering Seminar, 12/4/2002, 6 hours
- James Madison University College of Business, Value-Based Leadership: Restoring Character and Confidence in the Workplace, Memphis Light, Gas, & Water Training Center, 11/12/2002, 6 hours
- Memphis Engineer's Club, Cryptology: From the Iron Age to the Information Age, Memphis Engineer's Club, 11/4/2002, 1 hour
- American Public Power Association, 2002 Business and Financial Workshop, Memphis, TN, 9/25/2002, 3 hours
- American Public Power Association, Users' Views of utility Customer Information Systems: Lessons Learned, Memphis, TN, 9/25/2002, 2 hours, Presenter
- Memphis Engineer's Club, Uninterrupted Power Systems, Memphis Engineer's Club, 9/23/2002, 1 hour
- Memphis Engineer's Club, Engineering Ethics, Memphis Engineer's Club, 8/19/2002, 1 hour
- Professional Development Seminars, Inc., Engineering Ethics and Design Concerns, Memphis, TN, 10/19/2001, 15 hours
- Schinnerer & Company, Understanding and Managing Risk (levels 1 & 2), Memphis, TN, 7/16/2001, 10 hours
- Professional Development Seminars, Inc., Engineering Ethics, Building Design, and Forensic Engineering, Memphis, TN, 10/20/2000, 15 hours
- Vanderbilt University, Executive Leadership Program, Nashville, TN, 10/18/2000, 24 hours
- Memphis Light, Gas & Water, Negotiation Skills Training, Memphis, TN, 10/18/2000, 8 hours
- Network Computing, Corporate Network Implementation feature article, Memphis, TN, 8/7/2000
- The Ascent Group, Inc., Customer Service Quarterly Customer Information System feature article, Memphis, TN, 5/2/2000

- Public Utilities Reports, Inc., Principles of Public Utilities Operations and Management, Memphis, TN, 2/1/2000, 21 hours
- Memphis Light, Gas & Water, The Future of Engineering Design Technology, 1999 MLGW Engineering Seminar, 12/15/1999, 5 hours
- Enerlink, Industrial electric and gas utility billing, Atlanta, 12/15/1999, 16 hours
- Memphis Light, Gas & Water, Executive Development Program, Memphis, TN, 11/10/1998, 3 year program
- Professional Development Seminars, Inc., Engineering Challenges Design with major downtown redevelopment, Analysis of Electrical Codes, Memphis, TN, 10/16/1998, 15 hours
- Professional Development Seminars, Inc., Regional Electrical Distribution and Possible Effects of Deregulation and Design and Construction Challenges, Memphis, TN, 10/17/1997, 15 hours
- Memphis Light, Gas & Water, Effective Strategies, Memphis, TN, 4/16/1997, 8 hours
- Computer Associates, Understanding SQL, Memphis, TN, 9/10/1996, 8 hours
- Memphis Light, Gas & Water, Kepner Tregoe Decision Analysis & Risk Analysis, Memphis, TN, 7/11/1995, 24 hours
- Memphis Light, Gas & Water, PE Review Classes, Memphis, TN, 2/22/1995, 68 hours
- Memphis Light, Gas & Water, Managing for Productivity, Memphis, TN, 9/12/1988, 28 hours
- Memphis Light, Gas & Water, Practical Employment Law, Memphis, TN, 3/14/1988, 8 hours