

## The best training... period!

**I**magine a world where you can earn a salary while receiving free college credits. That world is here now at the IBEW/NECA Training Center. This is the apprenticeship and education center for the members of International Brotherhood of Electrical Workers (IBEW) Local 82. This state-of-the-art facility offers apprenticeships in two highly rewarding fields: Inside Wireman and Teledata Installer Technician.

### What is Apprenticeship?

The apprentice learns the skills of the trade through on the job training, working alongside an experienced Journeyman who passes on the skills that he or she has learned over the years. In addition, the apprentice receives related classroom instruction that produces competency and pride that leads to becoming a true

craftsman.

Another true advantage to apprenticeship is they earn while they learn. Apprentices start earning a livable wage as soon as they start working.



*Second year apprentices Chris Mattern (left) and Brian Olwin, participate in a conduit bending class at the Dayton Electrical JATC.*

They receive pay advancements throughout their apprenticeship based on performance.

### Earn College Credit

The IBEW/NECA Training Center has an articulation

agreement with Sinclair Community College. Once someone has completed the apprenticeship training, they receive a block of credits towards an Associates Degree in Technical Studies (45 credit hours). Or they can be applied to specific classes in a four-year degree program. C.E.U. credits are also earned for certain Journeyman classes.

### Qualifications

In order to become an apprentice, certain qualifications must be met and an application must be completed. Basically, an apprentice can become indentured at 18 years of age, though one may apply at 17.

They must be a high school graduate or have received a G.E.D. certificate, and must have at least one credit of Algebra. Applications are taken daily and classes begin in September.

### Inside Wireman

This is a 5-year training program. Inside Wiremen install conduit, electrical wiring, fixtures and electrical apparatus inside commercial buildings and in a multitude of industrial settings. Duties include:

- Planning and initiating projects
- Establishing temporary power during construction
- Establishing grounding systems
- Installing electrical service to buildings and other structures
- Establishing power distribution with a project

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## LEED Certification becoming green

**W**ith all the technology at our fingertips today, it only makes sense to apply it to our buildings. That's why the U.S. Green Building Council (USGBC) promotes the construction of environmentally friendly, high-performance buildings through its sponsorship of the Leadership in Energy and Environmental design (LEED) Green Building Rating System. The purpose of this rating system is to provide an objective standard for

certifying that a building is environmentally friendly or "green." As a result of the public's rising concern about the environment and rising energy costs, there is a growing movement among public and private building owners to have their buildings LEED certified.

In addition, sustainable, high-performance buildings are becoming more important because they are being mandated by several government agencies. The Army, Navy and General

Services Administration, the federal government contractor, among others, now require LEED. Officials in Chicago, California, Maryland, Oregon, Vancouver and New York City have decreed that all new municipal buildings will be built according to LEED guidelines.

### LEED certification process

LEED certification of a building project starts with the owner's decision that the project will be "green." In the early stages of design, the owner registers its

intent to have the building project LEED certified with the USGBC. This decision must be made early on in the project because LEED certification will drive many fundamental decisions throughout the design and construction process.

As part of the registration process, the owner establishes goals for the project in the following six categories:

- Sustainable Site (SS)
- Water Efficiency (WE)
- Energy & Atmospheres (EA)

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## LEED *cont'd*

- Materials & Resources (MR)
- Indoor Environmental Quality (EQ)
- Innovation & Design Process (ID)

Credits are earned in each category and the number of credits earned by the project will determine the level of LEED certification. To be LEED certified, a project must earn at least 40 percent of the core credits. After certification, a project can earn LEED Silver, Gold or Platinum rating by achieving more than 50, 60 or 80 percent of the core credits, respectively. The Heapy Engineering building has obtained a LEED Silver rating. (see *What's it mean to be green?*)

### LEED accreditation

While not required, a LEED-accredited professional can be

a valuable asset to a building project seeking registration because of the knowledge of the process and requirements. Having one or more LEED-accredited professionals on staff may be advantageous for



*Heapy Engineering Building: awarded LEED Silver rating*

the electrical contracting firm from an operational and marketing standpoint. For example, in the MR category, there are prerequisites and credits for construction waste management, use of recycled building materials and the use of material manufactured

within a radius of 500 miles. These and other LEED prerequisites and credits could impact the electrical contracting firm's project costs and productivity.

Lighting and power distribution systems are both influenced by the LEED rating system. The reduction of site light pollution is covered under Credit 8 in the SS category. Prerequisite 2 of the EA category impacts the selection and layout of interior lighting, lighting control requirements and the selection of transformers and motors. Potentially, LEED requirements could influence not only the

lighting and power distribution system but also the building's control and communication systems.

The electrical contracting firm should be aware of LEED and its potential impact on the electrical contracting firm's market. Being on the leading edge of the trend toward more environmentally friendly and efficient buildings and being familiar with LEED may provide the electrical contracting firm with a competitive advantage, thereby becoming the customer's preferred supplier of electrical services.

With new awareness of the environmental impact of building construction and material selection, sustainable design is an idea whose time has finally arrived.

*Source: Electrical Contractor, Dr. Thomas E. Glavinich*

## Training *cont'd*

- Installing new wiring and repairing old wiring
- Providing power and controls to motors, HVAC and other equipment.
- Installing receptacles, lighting systems and fixtures
- Installing fire alarm and security systems

### Teledata Installer Technician

This is a 3-year training program. The Installer Technician works on various types of systems: entertainment (audio, video,

multimedia); communications (telephone, local area networks, intercoms); life safety (access control, burglar alarms, video surveillance and nurse call); control of indoor, outdoor and specialty lighting and control of heating, ventilation, and air conditioning. Duties include installing, connecting, calibrating and servicing products that:

- Move voice, video, audio and data signals around premises
- Control signals
- Use signals to control mechanical and electrical apparatuses.

*The IBEW/NECA Training Center is run by the Joint Apprenticeship Training Committee (JATC), a nonprofit organization that is jointly supported through a collective bargaining agreement with the Western Ohio Chapter of the National Electrical Contractors Association and IBEW Local 82. [www.daytonohiojatc.org](http://www.daytonohiojatc.org).*

## Why become a Union Electrical Worker?

- The Government Accountability Office found that union apprenticeship programs in the Department of Labor system graduated 47% of their apprentices, compared to only 30 percent in the nonunion programs. And the pay rates for union apprentices is 24% higher than nonunion programs. **The Dayton Electrical JATC graduation rate is 80%...almost twice the national average!**
- Earn while you learn. Apprentices start earning a livable wage as soon as they start working. They receive pay advancements throughout their apprenticeship.
- Great employment opportunities. The industry employs over 650,000 electrical workers and 70,000 electrical contracting firms and produces an annual volume of over \$95 billion.
- State-of-the-art training. Students are provided with the highest quality training in the electrical industry.
- Equal opportunity for all. Enrollment of minorities in union apprentice programs is about three times the number enrolled in non-union programs, and there are four times as many women enrolled in union training. The graduation rate of minorities and women from union apprentice programs is three times that of non-union programs. The All-trades graduation rate for union apprentice programs is 82.2 percent, compared with 17.8 percent for non-union programs.

## CONNECTIONS

January, 2006

Your comments, suggestions and questions are welcome! Contact the Western Ohio Chapter - NECA.

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website: [www.wocneca.org](http://www.wocneca.org)  
phone: 937-299-0384  
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## What's it mean *to be green?*

**B**uilding high-efficiency facilities, for schools, business and other uses, has grown 37% since last year, according to the U.S. Green Building Council. The advocacy has 5,500 members, including non-profits, government agencies and corporations. Its membership has grown by 1,000 percent in the last four years.

Since 2000, when the council began registering and certifying high-efficiency buildings, some 273 have completed certification and more than 2,164 are in the works.

Let's take a look at what it means to be green in Ohio.

### Heapy Engineering

Heapy Engineering, a mechanical and electrical consulting design firm in Dayton, Ohio, celebrated its 60<sup>th</sup> year in 2005. Heapy's 45,000 square foot state-of-the-art office building serves as a working example of the building systems they design. A major focus was to provide plumbing-HVAC-electrical (PHE) systems in the building that were designed for employees, through a click of their computer mouse, to control their office environment. This high performance building is

supported by a web-based LonWorks system that integrates the control of 8 separate building systems.

From the minute you access the building early in the morning, using your key fob to unlock the door, the building starts working automatically to meet your needs. The HVAC system and lights in your work area come on, and even the path you take to your desk lights up. An occupancy sensor doesn't just turn the lights on and off, but, by day, changes the HVAC control setpoints and, by night, becomes part of the security system.

Additional energy efficient construction methods were incorporated in this building. A light harvesting system is used in the atrium area to make use of available natural light. Occupancy sensors are used throughout the building. Radiant flooring is used to reduce the startup load for the VAV reheat systems, and provide supplemental heat for the building perimeter. The building also uses a direct vented high efficiency boiler for heating purposes. A high density of zoning for all areas provides flexible and efficient control of the building comfort systems.

### Jones Federal Building and Courthouse

The Nathaniel R. Jones Federal Building and U.S. Courthouse in Youngstown, Ohio was the first courthouse completed by the U.S. General Service Administration (GSA) to receive LEED certification. Built on an urban brownfield site, the facility was designed to contribute to the revitalization of downtown Youngstown. Reflective roofing and the use of concrete instead of asphalt parking-lot paving reduce the project's contribution to the urban heat-island effect.

More than 70% of the total construction debris, by weight, was recycled; soil and old concrete foundation materials were excavated and used for site grading. More than 60% of the building materials used, by cost, were sourced or manufactured locally. Recycled content materials included carpeting and structural steel.

The building was designed to be energy efficient, using extensive day lighting, spectrally selective glazing, and photoelectric sensors to minimize electricity use for lighting.

### KeyCorp

KeyCorp's Tiedeman campus in Brooklyn, Ohio is the first

financial services company in the Midwest to be certified by the USGBC as a green building. The 750,000 square-foot building and campus is comprised of two buildings and a parking garage, housing over 2,000 employees. The campus was built on a brownfield site, which has been reclaimed and beautifully designed using water-efficient landscaping. Overall, the campus' use of environmentally smart procedures, such as the use of low-mercury bulbs in lighting fixtures as a standard practice, will reduce operating costs by more than \$43,000 each year.

KeyCorp encourages employees to use alternative transportation to reduce environmental emissions from personal vehicles. The company worked with the City of Brooklyn to provide a bus stop at the campus, which was built near a Cleveland Rapid Transit station.

To help qualify as a green building, the company implemented new green housekeeping practices, calling for the use of environmentally friendly products and the use of recycled-recyclable materials in future renovation and maintenance projects. Employees recycled approximately 108 tons of paper and cardboard last year to reduce waste.

### Quebe Appointed

Dennis Quebe, CEO of Chapel-Romanoff Technologies, LLC, was recently appointed to



*Dennis Quebe*

the NECA Technology Task Force for 2006. The mission of this task force is to develop a course of action for NECA and its members to respond to the growing use of technology in the construction industry.

### Creating a little magic

**F**or over 12 years, volunteers from the International Brotherhood of Electrical Workers (IBEW) Local 82 and the National Electrical Contractors Association (NECA) Western Ohio Chapter have created magic downtown by lighting up streets and buildings for the holiday season.

This year, 39 Local 82 members participated in the project. The vans, ladders, bucket trucks and other



equipment are supplied by NECA contractors. This year the participants included ESI Electrical Contractors, Chapel Electric, Wagner Smith Company, Kastle Electric, Complete Electrical Services, and Chapel-Romanoff Technologies (CRT).



# CONNECTIONS

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### The U.S. Marine Corps Reserve Toys for Tots program

collects new, unwrapped toys each fall and distributes these toys as Christmas gifts to children in the community. The primary goal of Toys for Tots is to deliver, through a shiny new toy, a message of hope to needy youngsters that will motivate them to grow into responsible, productive, patriotic citizens and community leaders. On December 13 and 14, 2005, the Marine Corps distributed toys to over 4500 children, at the IBEW Local 82 Union Hall.



*Marine Reservists distribute new toys to needy children.*

**Happy 90<sup>th</sup> Anniversary**  
**IBEW Local 82**  
**Chartered on January 20, 1916**

### The Western Ohio Chapter - National Electrical Contractors Association Directory:

#### NECA Members

Aztec Electric, Inc.  
 Chapel Electric Company  
 Chapel-Romanoff Technologies  
 Complete Electrical Service  
 D.R. Electric, Inc.  
 ESI Electrical Contractors  
 Freedom Electrical Contractors  
 High Voltage Maintenance  
 Kastle Electric Company  
 Kastle Technologies  
 Lake Erie Electric, Inc.  
 Maxwell Lightning Protection  
 Mutual Electric Company  
 Reliable Electrical Mechanical  
 Studebaker Electric  
 Wagner Smith Company  
 York Electric, Inc.

#### Contributing Contractors

Automated Controls  
 Integrated Control Solutions  
 Justice Electric  
 Luehrs Electric, Inc.  
 M.B.A. Electric, Inc.  
 Nitro Electric Co.  
 North Hills Electric & Eqmmt.  
 Power Services  
 Precision Electrical Contrs.  
 Productive Electric, Inc.  
 Q.O.B. Electric, Inc.  
 Spurling Electric Co., Inc.  
 The W.G. Fairfield Co.  
 Triad Electrical  
 Union Lightning Protection  
 Wheeler Electric  
 Wilson Sign Company

#### Affiliate Members NECA

Becker Electrical Supply  
 Copp Systems Integrator  
 FD Lawrence Electric Company  
 Heapy Engineering LLC  
 Riffle & Associates  
 Square D / Schneider Electric

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