

# National Training Institute

ENGAGING IN EXCELLENCE

**2010**

21<sup>st</sup> National Training Institute

INFORMATION BOOKLET



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**IMPORTANT INFORMATION  
FOR THE 2010 NTI!!**

Register on-line at <http://register.njatc.org>

Plus you can track NTI Technical  
Course enrollment at <http://nti.njatc.org>

# 2010 National Training Institute

The National Joint Apprenticeship and Training Committee's National Training Institute (NTI), an annual week of training, offers a variety of educational and training opportunities to meet the rapidly changing demands of the electrical industry. The NTI is divided into several different functions, all taking place simultaneously: Professional Education Classes ("I Group"), Technical Training Classes ("T Group"), Outstanding Apprentice Graduate Program ("A Group"), a special series of seminars for JATC Members and Training Directors ("C Group" and "SC Group"), and a special series of seminars for Electrical Contractors ("EC Group"), Business Managers ("M Group") and the Outside Industry ("O Group") that take place throughout the week at different locations on the campus of the University of Michigan. Please join us for the 21<sup>st</sup> Annual National Training Institute July 31 - August 6, 2010.

New to NTI for 2010:

- ***New Outside Industry Group at NTI***

The "O Group" is a new NTI program developed specifically for those associated with the Outside Line Construction or Utility Industry. The program presentations will be focused on topics that individuals working in this sector of the electrical industry will find of interest. The "O Group" is for Outside Line Contractors, Business Managers, Chapter Managers, Training Directors, Instructors, Program Administrators and anyone else interested in today's Outside Industry. Potential topics include OSHA T&D Partnership, Outside Training Initiatives, Supervision Training, Outside Training/Employment Opportunities, Smart Grid, and Legal Issues to name a few of the program's presentations. This 2 ½ day program is guaranteed to give you a better understanding of the opportunities available in the Outside Industry, and what the NJATC is doing to help prepare the workforce to meet the growing demands of this sector of the electrical industry.

- ***Extracurricular Activities***

Registration for the day trips for family as well as evening excursions are being handled a little differently this year. The activities and website link of the company hosting the activities this year will be announced shortly. You may register for them at anytime. You will be required to pay for the activities you select when you register for them. Look for a Special Bulletin in the near future for this information.

## How to Register... ON-LINE

This year, the NJATC is proud to continue to provide an easier way to register for the National Training Institute. We have created an on-line registration system that will allow instant registration in an easy fashion. The following instructions are here to provide an overview of this system. If you have any questions about using this system, please contact Tim Strickland directly at 865-380-9044 or [tims@njatc.org](mailto:tims@njatc.org).

On-line registration is divided into two roles: a “Sponsor” and a “Student”. A Sponsor is the Training Director, or Administrator that is approving and paying for a registration. A Student is the individual attending the Institute. A Sponsor may also attend the Institute by submitting a registration as well.

Due to the nature of registration, it is required that a Sponsor be the primary contact for the NJATC. We have set the Registration System up so that a Sponsor must log on and manage their Students. The Sponsor adds each student they wish to send to the Institute to the Registration System. Once a Student has been added to a Sponsor’s record, either the Sponsor or the Student can go through the Registration Process.

Once a Student has been registered, either by the Student or by the Sponsor, they must then be approved by the Sponsor. After each student has been approved, the Sponsor may then pay for the registration. Options for payment on-line are via Credit Card or if you have an account with the NJATC, you may choose NET 30 Terms.

### **Sponsor**

If you registered for NTI last year, please use the same username and password. Open your internet browser and go to <http://register.njatc.org>. There, you will be presented with options. Please select NTI Registration. This will take you to a logon screen to enter your username and password.

You will be taken to the Sponsor Management Console. This is where you will Add, Edit, Register, Approve, and Pay for each Student. At first you will see a table with a Participant Table. You are not listed here until you register. To do so click the link to the right that reads “You are not registered: Register Yourself.”

Then you can add additional Students or click Register by the Student already listed. You will need their First Name, Last Name and Gender. Simply click the “Add New” button on the bottom right of the table and fill in at least the required information and submit. Once all of the Students have been added to the console, you may either register each Student yourself, or give the username and password generated for each Student to that individual so that they may register themselves. If you choose to register them, simply click the “Register” button next to a Student to begin the process. (See Student Section for detailed instructions on the registration process.)

After a Student has registered, you will be notified by email to approve the registration. You may click the “Approve” button to see all of the registration information for that Student. At the bottom of the screen is a “Yes” or “No” button to approve the registration. Please note that once a registration is approved it cannot be modified. A registration must be approved to be paid. If you want to change a class or housing for a participant, please contact the NJATC.

Finally, after you have approved all of the Students in the console or at any point you decide to pay for some of the Students, add a check into the selection box for each Student to be paid. Now select the “Pay” button on the bottom left of the console. You will be given a summary of everyone’s registration cost and given the two options to pay.

After all Students have been paid, your registration is complete.

### **Student**

As a student you must have a Sponsor create your username and password prior to attempting to register. Once your Sponsor has provided this information, open your internet browser and go to <http://register.njatc.org> to register. After you have submitted your registration, you may login at any time to see the status and to get a summary of your registration.

### **Registration Steps:**

1. Logon at <http://register.njatc.org>
2. Completely enter your Personal Information
3. Teaching Experience
4. Years you have attended NTI
5. Select any Current Titles (click next)
6. Choose the desired GROUP from the dropdown list
7. Check the box in the Registration Option
8. Based on your Group, select any classes you wish to attend (repeat for multiple class options)
9. If you have any guests attending, click the “Add” button to add all guests (click next)
10. Review your registration
11. Print the page for your records (or save the PDF by clicking the PDF logo)
12. Click “Submit”

Once you submit your registration, an email is sent to your Sponsor letting them know you have completed your registration. They must then logon and “Approve” and “Pay” for your registration. At any time you may login and view your status. Until a registration is approved, you may re-register. Once a registration is approved, you may no longer edit the registration.

We recommend viewing your registration summary on a regular basis, in case a class has been cancelled. If a class is cancelled, it would be removed from your registration summary. At this time you should contact your sponsor to ensure a replacement is chosen.

## GROUPS

**“I Group”** is for those participants registering for instructor training. There are four years of instructor training groups. If you are an instructor and have never attended the National Training Institute or have no professional education experience, you **MUST** register as a 1<sup>st</sup> Year “I Group” participant. All other “I Groups” are taken in consecutive order. For example, 1<sup>st</sup> & 2<sup>nd</sup> Year “I Group” is the prerequisite for 3<sup>rd</sup> Year “I Group”. There is an advanced professional education course which is also considered a part of “I Group”. This course may only be taken one time and is available to any NTI participant who has completed all four years of the Instructor Training Program. Course 52 is recommended for NTI Graduates and will be offered in the morning only.

*3<sup>rd</sup> Year, 4<sup>th</sup> Year and Advanced Standing “I Group” participants will need to register for one (1) 100 Level Technical Course.*

**“T Group”** is for those participants who will be taking technical training courses **ONLY**. There are many different technical courses offered at NTI. You can select two (2) 100 Level (half day) Courses **OR** one (1) 200 Level (all day) Course for the standard NTI registration fee. Any participant can register for 300 Level Technical Courses which are offered before NTI and do not interfere with other training classes. **There will be an additional fee for the 300 Level courses.** You will find a comprehensive description of all technical training opportunities beginning on page 17.

**“C Group”** is for JATC Committee Members, Local Union and Chapter Officers, and all Training Directors. The format for “C Group” is a combination of general session presentations and small group breakout sessions where you choose your own area of interest. This year’s “C Group” program should be the most comprehensive meeting of apprenticeship and training matters ever offered. Every JATC should be represented by management and labor and no Training Director should miss NTI - particularly the “C Group” sessions.

**\*SPECIAL NOTE:** Committee Members or Training Directors who want to attend some “C Group” sessions and a 100 Level Technical Course may do so. To do so you must register as a “C Group” participant. In the Housing Drop-down Menu you will pick your housing selection that included a 100 Level Technical Session. By choosing this option, you **WILL** miss some “C Group” presentations. You will be required to add \$175.00 to your “C Group” fee in order to register for a Technical Course.

**“SC Group”** is an abbreviated part of “C Group”. “SC Group” participants can attend the Trade Show and the Welcome Reception on Sunday and “C Group” sessions on Monday and Tuesday. “SC Group” is intended for those individuals who cannot attend the entire week of NTI, but still recognize the importance of the “C Group” seminars and sessions.

**“EC Group”** is two and a half days of presentations and seminars. The NJATC and NECA are working collaboratively on the “EC Group” (Electrical Contractor). The “EC Group” is a separate NTI group designed especially for electrical contractors and their key personnel. The special group will be offered classes and presentations that deal specifically with business development opportunities in the electrical industry. Some of the presentations and course offerings will be offered by NECA’s Management Education Institute (MEI). “EC Group” participants can attend the Trade Show and the Welcome Reception on Sunday. “EC Group” sessions will be Sunday afternoon and all day Monday and Tuesday. **Registration for this group is done through the NJATC’s website <http://register.njatc.org>.**

**“A Group”** is a program for Outstanding Apprentice Graduates. This is an opportunity for JATCs to send their Outstanding Apprentice Graduates to the NTI as a reward for their exceptional work. “A Group” will gain exposure to new technologies of the trade. There will be several times throughout the week that the “A Group” will be recognized for their accomplishments. The format for the “A Group” is a morning session exclusively for this group and then an afternoon special technical training session chosen by the NJATC.

**“M Group”** is a program for the IBEW Local Union Business Managers. The “M Group” has the option to participate in the full week of NTI or the half week depending on the Business Manager’s schedule and availability. There will be several special sessions during the week of NTI just for these Business Managers as well as attending “C Group” sessions. **Registration for this group is done through the NJATC’s website <http://register.njatc.org>.**

**“O Group”** is a new NTI program developed specifically for those associated with the outside line construction or utility industry. The program presentations will be focused on topics that individuals working in this sector of the electrical industry will find of interest. The “O Group” is for Outside Line Contractors, Business Managers, Chapter Managers, Training Directors, Instructors, Program Administrators and anyone else interested in today’s Outside Industry. Potential topics will include OSHA T&D Partnership, Outside Training Initiatives, Supervision Training, Outside Training/Employment Opportunities, Smart Grid, and Legal Issues to name a few. This half week program is guaranteed to give you a better understanding of the opportunities available in the Outside Industry, and what the NJATC is doing to help prepare the workforce to meet the growing demands of this sector of the electrical industry. “O Group” participants are encouraged to attend the Trade Show on Saturday and the Opening Ceremony/Welcome Reception on Sunday. “O Group” sessions will be Sunday afternoon and all day Monday and Tuesday. **Registration for this group is done through the NJATC’s website <http://register.njatc.org>.**

## Housing Options

Several NTI Housing options are available to registered participants. This year, all registered participants will be responsible for making their OWN housing arrangements **directly with the hotel or University Housing**. The NJATC has negotiated special room rates with each participating hotel listed and the University of Michigan Housing. Room availability may be limited, so we suggest that you make your reservations early. In past years, hotels have filled up far in advance. Please use the phone numbers or website addresses provided here or on the NTI website to secure your own housing.

### ON-CAMPUS Housing at University of Michigan

#### Stockwell Hall Dormitory

Stockwell Hall will be one location for On-Campus housing during the 2010 National Training Institute. Stockwell went through a full renovation before students arrived for the 2007 Fall Semester. This beautiful facility can accommodate up to 228 NTI participants. **This is not an apartment dorm and bathrooms are shared on each floor.** Two types of rooms are available in Stockwell. There are 186 single occupancy rooms and 21 double occupancy rooms. The Housing Department will have Housekeeping Services during NTI for our participants. **This building is air conditioned.** For reservations in Stockwell Hall Dormitory, please call 734-764-5297 or reserve on-line at: <http://www.conferences.housing.umich.edu/housing/stockwell/>.

**Single Occupancy Room Rate: \$65 per night**

**Double Occupancy Room Rate: \$80 per night or \$40 per person**

#### Cambridge House



The building's neo-Tudor style architecture lends it an air of tradition and history. Adjacent to the Michigan Union on Central Campus, Cambridge House is just steps away from University classrooms, meeting rooms, administrative buildings, and local restaurants. For your convenience, located in the Michigan Union, you will find the Michigan Union Bookstore, access to ATM machines, the University of Michigan Credit Union, Amer's coffee shop, Wendy's, Subway and Villa Pizza restaurants and a UPS store. When it opened in 1920, Cambridge House was originally located in the Michigan Union and named the Michigan Union Hotel. In 1963, Cambridge House was added to the Michigan Union and the hotel was moved and renamed. Today, Cambridge House Residence Hall, with comfortable rooms and **private baths**, is available to all NTI Participants. **This building is NOT air conditioned.** A Linen Package will be given to participants upon check-in. For reservations in

Cambridge House please visit <http://www.conferences.housing.umich.edu/housing/cambridge/> or by phone at 734-764-5297.

**Single Occupancy Room Rate: \$50 per night**

**Double Occupancy Room Rate: \$64 per night or \$32 per person**

## NTI Recommended OFF-CAMPUS Housing

### Briarwood (South Campus)

#### **Courtyard by Marriott**

3205 Boardwalk Drive  
Ann Arbor, MI 48108  
734-995-5900  
[www.marriott.com/arbch](http://www.marriott.com/arbch)  
Rate \$119

#### **Fairfield Inn**

3285 Boardwalk Drive  
Ann Arbor, MI 48108  
734-995-5900  
[www.marriott.com/arbfi](http://www.marriott.com/arbfi)  
Rate \$105

#### **\*Four Points Sheraton**

3200 Boardwalk Drive  
Ann Arbor, MI 48108  
734-996-0600 or 800-368-7764  
[www.sheratonannarbor.com](http://www.sheratonannarbor.com)  
Rate \$115

#### **Hampton Inn South**

925 Victors Way  
Ann Arbor, MI 48108  
734-665-5000  
[www.annarborsouth.hampton.com](http://www.annarborsouth.hampton.com)  
Rate \$106

#### **Holiday Inn Express**

600 Briarwood Circle  
Ann Arbor, MI 48108  
734-761-2929 or 800-344-7829  
[www.hiexpress.com](http://www.hiexpress.com)  
Rate \$105

#### **\*Holiday Inn Hotel & Suites**

3155 Boardwalk Drive  
Ann Arbor, MI 48108  
734-213-1900  
[www.holidayinn.com](http://www.holidayinn.com)  
Rate \$106

#### **\*Kensington Court**

Hilton Boulevard  
Ann Arbor, MI 48108  
734-761-7800 or 800-344-7829  
[www.kcourtaa.com](http://www.kcourtaa.com)  
Rate \$124

### Downtown (Central Campus)

#### **\*Bell Tower Hotel**

300 South Thayer Street  
Ann Arbor, MI 48104  
734-769-3010 or 800-562-3559  
[www.belltowerhotel.com](http://www.belltowerhotel.com)  
Rate \$125 – Group Code: #481

#### **\*Dahlmann Campus Inn**

615 East Huron  
Ann Arbor, MI 48104  
734-769-2200 or 800-666-8693  
[www.campusinn.com](http://www.campusinn.com)  
Rate \$125

### Jackson Road

#### **\*Weber's Inn**

3050 Jackson Road  
Ann Arbor, MI 48105  
734-769-2500-800-443-3050  
[www.webersinn.com](http://www.webersinn.com)  
Rate \$121 Single / \$131 Double

### North Campus

#### **\*Holiday Inn North**

3600 Plymouth Road  
Ann Arbor, MI 48105  
734-769-9800  
[www.hiannarbor.com](http://www.hiannarbor.com)  
Rate \$103

\*Full Service Hotel

## NTI FEE STRUCTURE

This is the fee schedule for this year’s National Training Institute. Below you will find a chart outlining participant registration fees which should help in determining the amount due for your registration. This will be calculated automatically when you register on-line:

Participant Group	2010 Cost	Housing Location	Included In Fee
“I Group” “T Group” “A Group”	\$625.00 prior to June 20 \$725.00 June 21- July 22 \$875.00 after July 22	Participants are responsible for all housing reservations	Trade Show, Welcome Reception, NTI Participant Gifts, 5 Lunches, Morning and Afternoon Breaks, and Graduation Ceremony. Professional Education Training and/or Technical Course.
“C Group” Participant (No Technical)	\$500.00 prior to June 20 \$600.00 June 21- July 22 \$750.00 after July 22	Participants are responsible for all housing reservations	Trade Show, Welcome Reception, NTI Participant Gifts, 5 Lunches, Morning and Afternoon Breaks, and Graduation Ceremony.
“M Group” Participant (No Technical) <b>FULL WEEK</b>	\$500.00 prior to June 20 \$600.00 June 21- July 22 \$750.00 after July 22	Participants are responsible for all housing reservations	Trade Show, Welcome Reception, NTI Participant Gifts, 5 Lunches, Morning and Afternoon Breaks, and Graduation Ceremony.
“M Group” Participant <b>HALF WEEK</b>	\$250.00 prior to June 20 \$350.00 June 21 July 22 \$500.00 after July 22	Participants are responsible for all housing reservations	Trade Show, Welcome Reception, NTI Participant Gifts, 3 Lunches, and Morning and Afternoon Breaks.
<b>Additional “C Group” Options:</b> If you wish to take a Technical Course add \$175.00 to the Appropriate Fee.			
“EC Group” “SC Group” “O Group” Participant	\$250.00 prior to June 20 \$350.00 June 21 July 22 \$500.00 after July 22	Participants are responsible for all housing reservations	Trade Show, Welcome Reception, NTI Participant Gifts, 3 Lunches, and Morning and Afternoon Breaks.
Spouse, Child Adult or Guest (All Guest)	\$100.00 prior to June 20 \$200.00 June 21 - July 22 \$250.00 after July 22	Participants are responsible for all housing reservations	Trade Show, Welcome Reception, NTI Family Gifts, and Graduation Ceremony. <b>NO BREAKS OR LUNCHESES PROVIDED.</b>

### MEALS

There will be a light breakfast available to all registered participants upon arrival at their morning classes. **NOTE: THERE ARE NO BREAKFASTS OR LUNCHESES SCHEDULED FOR FAMILY PARTICIPANTS!** The only evening meal provided by the NJATC for NTI participants will be the Sunday Evening Welcome Reception. All other evening meals will be on your own.

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# PROFESSIONAL EDUCATION COURSE DESCRIPTIONS

## FIRST YEAR (“I Group”)

### Course # 10: PRINCIPLES OF LEARNING

How people learn, remember, and apply related theory. Basic principles of learning. Kinds, definition, nature, effect, reinforcement, habit formation, transfer of learning, use of senses, retention, and motivation of the learner. Emphasis will be placed on establishing student/instructor relationships and developing an effective learning environment for adult learners.

### Course # 11: ELEMENTS OF TRADE TEACHING

Nature of trade education and the trade teaching process. Goals of NJATC and trade teaching. Uniqueness of trade education, apprenticeship, and trade instructors. Nature of the subject matter taught, how it is identified, skills, knowledge, and attitudes. Process of teaching related trade subjects: establishing lesson objectives, preparing to teach, presenting new content, providing for application and practice, evaluation of learning and teaching. Managing the learning environment. Role of the related trade instructor and characteristics of good trade instructors.

## SECOND YEAR (“I Group”)

### Course # 20: PLANNING AND PRESENTING RELATED INFORMATION

Process of teaching related lessons with the emphasis being placed on application and putting theory into practice. Developing competency-based lesson plans using NJATC curriculum materials. Planning lessons that use the senses so learners will retain and use related information. Workshop in planning and presenting information lessons.

### Course # 21: USING INSTRUCTIONAL TECHNOLOGY

Overview of training aids available through NJATC. Review of the teaching process and use of audio and visual materials to aid in retention of related information. Emphasis is placed on computer applications in developing training material and its use in presenting related information. Workshop in the preparation and use of audio and visual training aids.

## THIRD YEAR (“I Group”)

### Course # 30: PERFORMANCE EVALUATION

Justification and review of using performance-based evaluations. Relationship between job analysis, teaching, and evaluation. Principles and practices of developing written and performance tests. Developing performance standards based on trade practices. Making observations while using checklists. Workshop in test construction.

### Course # 32: TEACHING AND MANAGING IN A TECHNICAL LABORATORY

This Third Year course builds on information presented in the First and Second Year courses in which participants gained knowledge about the teaching and learning process. The focus of this course is on preparing instructors to establish a laboratory learning environment and an instructional program where apprentices can develop essential knowledge and skills required to competently perform selected electrical tasks in a simulated work environment. Information

will be presented on the major topics of: laboratory learning environments, learning approaches used in technical laboratories, preparing for instruction in technical laboratories, delivering laboratory instruction, managing laboratory learning, managing student behavior, and maintaining a safe and efficient laboratory.

#### **FOURTH YEAR (“I Group”)**

##### **Course # 42: CREATING AN ACTIVE LEARNING ENVIRONMENT**

This course takes the instructor deeper into the instructional design processes that make training more successful. Students will learn to apply adult learning principles to the NJATC curriculum. Students will also learn about the instructional design and effective instructional strategies for a variety of training situations. Special emphasis will be placed on the design and use of “Active Learning Strategies” in both the classroom and laboratory settings.

##### **Course # 41: DISCUSSION METHODS**

A planned discussion led by a trained discussion group leader can be an extremely effective tool for instructing or teaching others how to perform a given set of tasks. However, discussions also can be very useful tools for: gathering data and information; problem-solving; testing comprehension; setting policy and strategy; and of course, changing opinions and individual points of view. Facilitating or leading a planned discussion touches many skill domains, including: group dynamics; team building; interpersonal communications; active listening; and presentation methods. Effective discussion leaders recognize the importance of preparing themselves to ask good questions; not only as a means of encouraging group interaction, but also as a tool for keeping the discussion moving and on track. The intent of this course is to equip all participants with a solid working knowledge of discussion leadership methods and techniques. This course is highly experiential and interactive.

#### **ADVANCED PROFESSIONAL EDUCATION TRAINING (“I Group”)**

##### **Course # 52: SPECIAL TOPICS IN TRAINING**

This Seminar is divided into six (6) specific topic areas, all of which relate to the professionalism and expertise of the trade/skill-based educator. The six general topics covered for this class are:

1. Introduce Course and Change Model
2. Managing Change
3. Conflict Management
4. Special Needs Learners
5. Active Training Programs
6. Contemporary Instructional Issues

A typical session begins with an instructor-led discussion of the topic and culminates with student-led case study resolution, practical exercise, seminar type discussion or other evidence of learner skill and ability.

**“I Group” participants, except 1<sup>st</sup> and 2<sup>nd</sup> Year, must sign-up for a 100 Level Technical Course.**

## **“I Group” Reminders:**

### **PORTFOLIO Assignments**

All “I Group” participants were given a portfolio assignment during the 2009 NTI. Each Instructor should be continually working on their portfolio throughout the year. Each Instructor can download the assignment from the NJATC website at [www.njatc.org](http://www.njatc.org) under the NTI tab. All NTI Instructors **MUST** remember to bring their portfolio to NTI 2010. There will be a portfolio session on Sunday August 1 at 10:00 a.m.

### **Pre-NTI Assignments**

All Second, Third, and Fourth Year “I Group” participants **MUST** complete an assignment before arriving at NTI 2010. Each Instructor can download the assignment from the NJATC website at [www.njatc.org](http://www.njatc.org) under the NTI tab. Your NTI Professor will be referring to these assignments on the first day of class. Please come prepared. You do not want to start off your NTI week behind on your assignments. This is not the same as the Portfolio Assignments.

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## **MASTER INSTRUCTOR & TECHNICAL COURSE DESCRIPTIONS**

The following are descriptions of the Technical Courses being offered at the 2010 National Training Institute. Participants enrolled in Instructor Training (“I Group”), except 1<sup>st</sup> and 2<sup>nd</sup> Year “I Group” participants, **MUST** select a 100 Level Course in addition to their regular Professional Education classes. All “I Group” participants may register for a 300 Level Course as long as it is not conducted from August 1 through August 6.

In 2007, an important shift occurred in the way we provide technical training at our National Training Institute (NTI). While not intended to diminish the importance of technical training, the NJATC believed this directional change was necessary and timely. All of the “I Group” (3<sup>rd</sup> Year, 4<sup>th</sup> Year and Advanced) technical training at NTI will be directly related to the curriculum and coursework that our JATC instructors teach. For example, rather than taking a general fire alarm technical class, our instructors will now take “Teaching the NJATC Fire Alarm Installation Course.” Instead of taking a general NEC<sup>®</sup> Code or Safety class, our instructors will now take “Teaching the NJATC Applied Codeology Course” or “Teaching the NJATC Electrical Safety-Related Work Practices – Based on NFPA 70E<sup>®</sup> Course.”

These courses address the relevant technical aspects of the material and, most importantly, utilize the same textbooks and workbooks our instructors teach from and are designed to ensure that the instructor is fully familiar with the learning objectives of each lesson. There is a special emphasis placed upon teaching the “best practices” and other instructor exercises that can be employed to ensure that the learning objectives of the class are sufficiently conveyed.

In addition to this change, in 2007 we also introduced a new NJATC Master Instructor Certification Program. The purpose of the Master Instructor Certification Program (MICP) is to recognize those JATC instructors who have demonstrated a superior technological mastery of specific subject material and have completed the National Training Institute’s Four Year Professional Education program. Several Master Instructor Certifications will be available encompassing all four of our National

Apprenticeship curriculums. For those instructors who have previously completed their Professional Education Program, they only need additional coursework in the specific area of their intended certification(s). Technical classes needed to meet the certification requirements can be taken at either NTI or any of the NJATC Regional or Host classes. It is the NJATC's sincere hope that collectively, these progressive changes will help ensure that our instructors will be better prepared and more comfortable with the course material they teach in their local JATCs.

**Any IBEW member, signatory contractor, or their employee may register for any technical training course.**

**Technical Training Only Participants ("T Group")** can select either one (1) 200 Level class or any two (2) 100 Level classes. All "T Group" participants are eligible to enroll in 300 Level classes. Please be sure that for any course you select, you have met the prerequisite listed. **NOTE: IF YOU ARE SIGNING UP FOR A COURSE WITH A PREREQUISITE, A COPY OF THE CERTIFICATE FROM THE PREREQUISITE COURSE ALONG WITH YOUR NTI REGISTRATION CONFIRMATION MUST BE FAXED TO Melissa Parsly at 865.380.9795.** Also, be sure to look at both the course description and the table to verify the exact days that a course is being offered since courses may end at different times throughout the week. *Please note there are several "T Group" classes that begin on Saturday or Sunday.*

## WHAT IS A...

### 100 LEVEL COURSE?

A 100 Level Course is a course that lasts from 12 - 24 hours. Most 100 Level courses last 16 hours and are offered in four-hour increments Monday, Tuesday, Thursday and Friday. These classes are offered both in the morning and afternoon. When you register for one of these courses, you will be scheduled in either the morning or afternoon session depending on the other class that you are scheduled to attend. Individuals attending the NTI for technical training only may register for two (2) 100 Level Technical Courses. Individuals registering for **Instructor Training ("I Group")** or **Advanced Professional Education** MUST register for one (1) 100 Level Course, **except 1<sup>st</sup> and 2<sup>nd</sup> Year "I Group" participants.** This 100 Level Course is included in your NTI registration fee. Those attending as **Outstanding Apprentice Graduates ("A Group")** will be assigned their technical training course; **DO NOT** select a technical training course.

### 200 LEVEL COURSE?

A 200 Level Course is a course that lasts from 32-36 hours and is offered Monday through Friday. Individuals registering for 200 Level Courses will only be able to attend that particular course during the NTI week. The only participants that may register for a 200 Level Course are those participants registered for Technical Training ONLY ("T Group"). "I Group", "A Group", and "C Group" **CANNOT** register for a 200 Level Class.

### 300 LEVEL COURSE?

A 300 Level Course is a Technical Training Course that can last from 4-24 hours. These classes are offered at various times over the two-week period. These courses may be offered before and after the week of NTI. Any IBEW member, signatory contractor or their employee may register for any 300 Level Technical Training Course. When registering for any 300 Level Course, be sure to review the course description and table carefully to assure that you have met any prerequisites listed and that there are no time conflicts with any other training that you may be taking. **ALL 300 LEVEL CLASSES**

**HAVE A FEE. ANYONE ENROLLING IN A 300 LEVEL TECHNICAL CLASS MUST PAY THE ASSOCIATED TECHNICAL COURSE FEE IN ADDITION TO THEIR REGULAR NTI REGISTRATION FEE, EXCEPT:** Any participant taking a 300 Level Course that ends prior to Sunday, August 1, 2010 and will not be attending any other NTI event except the Trade Show (You CAN attend the NTI Trade Show at no additional charge), can register and pay only the fee associated with the 300 Level Course of their choosing. These participants, attending ONLY a 300 Level Course, DO NOT have to pay the NTI registration fee, UNLESS they plan to attend the Welcome Reception or any other NTI event other than the Trade Show.

## Master Instructor Courses

**Third and Fourth Year “I Group” and Advanced Professional Education participants must register for ONE 100 Level Master Instructor Course. “T Group” participants may register for TWO 100 Level courses or ONE 200 Level course.**

Course Title	Course #	Days & Hours	Min.	Max.
<b>INSIDE MASTER INSTRUCTOR 100 LEVEL COURSES</b>				
AC and DC Theory Lessons, How to Teach NJATC	T-101	M T R F (16 Hours)	8	24
Codeology, How to Teach NJATC	T-103	M T R F (16 Hours)	15	35
Conduit Fabrication, How to Teach NJATC	T-105	M T R F (16 Hours)	5	20
Fiber Optic Installation – Hands-on Training for Instructors	T-107	M T R F (16 Hours)	6	16
Hazardous Locations Based on 2008 NEC TTT	T-111	M T R F (16 Hours)	15	35
Health Care Systems Curriculum, How to Teach NJATC	T-113	M T R F (16 Hours)	15	35
Instrumentation and Calibration Basics-Using the Fluke-744 Hart Calibrator	T-115	M T R F (16 Hours)	12	18
LED Lighting Simplified- TTT, Phillips Lighting	T-117	M T R F (16 Hours)	12	18
Motor Control Using NJATC Curriculum & Training Equipment, H2T	T-119	M T R F (16 Hours)	10	30
Orientation Lessons, How to Teach NJATC	T-121	M T R F (16 Hours)	8	24
Overcurrent Protection - Codes & Practices 3, How to Teach NJATC	T-129	M T R F (16 Hours)	15	35
Power Quality – How to Teach	T-131	M T R F (16 Hours)	12	50
Semiconductor and Digital Electronics Theory, How to Teach NJATC	T-141	M T R F (16 Hours)	5	20
Test Instruments (American Technical Publishers & Fluke Corp)	T-145	M T R F (16 Hours)	10	20
Traffic Signal Curriculum – 2 <sup>nd</sup> Year, How to Teach NJATC	T-147	M T R F (16 Hours)	8	16
Traffic Signal Level I - IMSA	T-149	M T R F (16 Hours)	8	30
Transformers and Motor Theory, How to Teach NJATC	T-153	M T R F (16 Hours)	5	20
Work Zone Safety – IMSA	T-155	M T R F (16 Hours)	8	30
<b>INSIDE MASTER INSTRUCTOR 200 LEVEL COURSES</b>				
Cable Splicing – Module I, How to Teach NJATC	T-201	M - F (36 Hours)	5	10
Cable Splicing – Module II, How to Teach NJATC	T-203	M - F (36 Hours)	5	10
Cable Splicing – Module VI, Wind Farm, How to Teach NJATC	T-205	M - F (36 Hours)	5	10
Code Calculations Course, How to Teach NJATC	T-207	M T R F (32 Hours)	15	35

<b>INSIDE MASTER INSTRUCTOR 200 LEVEL COURSES (CONT.)</b>				
<b>Course Title</b>	<b>Course #</b>	<b>Days &amp; Hours</b>	<b>Min.</b>	<b>Max.</b>
Fire Alarm Systems Introduction (Hands-On), How to Teach NJATC	T-209	M T R F (32 Hours)	10	32
Instrumentation, How to Teach the NJATC (Fundamentals of)	T-211	M - F (36 Hours)	6	12
Photovoltaic Systems, How to Teach the NJATC Course (Installing)	T-215	M T R F (32 Hours)	8	16
Transformers Course (For Inside Wireman)	T-221	M T R F (32 Hours)	5	30
<b>OUTSIDE LINE MASTER INSTRUCTOR 100 LEVEL COURSES</b>				
Outside Curriculum - AC/DC Theory, How to Teach NJATC	T-123	M T R F (16 Hours)	8	16
Outside Curriculum – 1 <sup>st</sup> Year Safety/OSHA, How to Teach NJATC	T-125	M T R F (16 Hours)	8	16
Outside Curriculum – 3D Transformer Lab, How to Teach NJATC	T-127	M T R F (16 Hours)	8	16
Rigging Curriculum, How to Teach NJATC	T-139	M T R F (16 Hours)	8	16
Traffic Signal Curriculum – 2 <sup>nd</sup> Year, How to Teach NJATC	T-147	M T R F (16 Hours)	8	16
Traffic Signal Level I – IMSA	T-149	M T R F (16 Hours)	8	30
Transformer Applications and Connections, How to Teach NJATC	T-151	M T R F (16 Hours)	8	16
Work Zone Safety – IMSA	T-155	M T R F (16 Hours)	8	30
<b>OUTSIDE LINE MASTER INSTRUCTOR 200 LEVEL COURSES</b>				
Cable Splicing – Module I, How to Teach NJATC	T-201	M - F (36 Hours)	5	10
Cable Splicing – Module II, How to Teach NJATC	T-203	M - F (36 Hours)	5	10
Cable Splicing – Module VI, Wind Farm, How to Teach NJATC	T-205	M - F (36 Hours)	5	10
Electrical Transmission and Distribution Partnership 10 Hour Safety Course	T-208	M T R (20 Hrs)	8	20
<b>TELECOMMUNICATIONS MASTER INSTRUCTOR 100 LEVEL COURSES</b>				
Fiber Optic Installation – Hand-on Training for Instructors	T-107	Sa M T R F (24 Hrs)	6	16
Foremanship Concepts for Telecommunications Project	T -109	M T R F (16 Hours)	6	12
Telephony, How to Teach NJATC Installer/Technician	T-143	Sa M T R F (24 Hrs)	6	14
<b>TELECOMMUNICATIONS MASTER INSTRUCTOR 200 LEVEL COURSES</b>				
Security Systems Course, How to Teach NJATC Installer/Technician	T-219	M T R F (32 Hours)	6	12
<b>RESIDENTIAL MASTER INSTRUCTOR 100 LEVEL COURSES</b>				
Conduit Fabrication, How to Teach NJATC	T-105	M T R F (16 Hours)	5	20
Residential Code Lessons, How to Teach NJATC	T-133	M T R F (16 Hours)	5	24
Residential Fire Alarms and Security Systems Lessons, How to Teach the	T-135	M T R F (16 Hours)	5	24
Residential Wiring Practices Lessons, How to Teach NJATC	T-137	M T R F (16 Hours)	5	24
<b>RESIDENTIAL MASTER INSTRUCTOR 200 LEVEL COURSES</b>				
Residential Advanced Technology Lessons, How to Teach NJATC	T-217	M T R F (32 Hours)	5	16

## “T Group” Technical Courses (Additional)

“T Group” Participants may register for TWO 100 Level courses or ONE 200 Level course selected from the Master Instructor courses or any of the following Technical courses.

Course Title	Course #	Days & Hours	Min.	Max.
<b>CABLE SPLICING COURSES, 100 &amp; 200 LEVEL</b>				
Cable Splicing – Module I, How to Teach NJATC	T-201	M - F (36 Hours)	5	10
Cable Splicing – Module II, How to Teach NJATC	T-203	M - F (36 Hours)	5	10
Cable Splicing – Module VI, Wind Farm, How to Teach NJATC	T-205	M - F (36 Hours)	5	10
Technology of Medium & High Voltage Cable Splicing & Terminations	T-175	M T R F (16 Hours)	10	24
<b>INSIDE &amp; RESIDENTIAL</b>				
Understanding AC Theory Course	T-229	M T R F (32 Hours)	5	30
Understanding DC Theory Course	T-231	M T R F (32 Hours)	5	30
Understanding Digital Electronics	T-233	M T R F (32 Hours)	5	20
Understanding Semiconductors Course	T-235	M T R F (32 Hours)	5	20
<b>SAFETY 100 LEVEL COURSES</b>				
First Aid/CPR & AED TTT	T-171	M T R F (16 Hours)	6	30
<b>SAFETY 200 LEVEL COURSES</b>				
Electrical Transmission and Distribution Partnership 10 Hour Safety Course	T-208	M T R (20 Hrs)	8	20
OSHA 500	T-213	M - F (36 Hours)	15	35
<b>VOICE, DATA AND VIDEO 100 LEVEL COURSES</b>				
AMP ACT I – Installing Premises Cabling Systems	T-157	M T R F (16 Hours)	9	14
AMP ACT II – Certifying and Troubleshooting Premises Cabling Systems	T-159	M T R F (16 Hours)	9	12
<b>VOICE, DATA AND VIDEO 200 LEVEL COURSES</b>				
AMP ACT I – Installing Premises Cabling Systems TTT *	T-223	M T R F (32 Hours)	4	8
TSLAN 500 Hands-On Fiber Optic Training Course for Local Area	T-227	S M T R F (40 Hrs)	8	12
<b>NECA &amp; TRAINING PARTNER SPONSORED 100 LEVEL COURSES</b>				
Arc Welding Principles, Processes, and Applications (Lincoln Electric)	T-161	M T R F (16 Hours)	5	10
AutoCAD 2011 Level I (Ronald A. Williams, Ltd)	T-163	M T R F (16 Hours)	10	20
AutoCAD 2010 - Intermediate PLUS (Ronald A. Williams, Ltd)	T-165	M T R F (16 Hours)	10	20
Digital Video Production for Training Effectiveness (ATP)	T-167	M T R F (16 Hours)	5	TBD
The Technology of Medium & High Voltage Cable Splicing & Terminations	T-175	M T R F (16 Hours)	6	24
Traffic Signal Level I – IMSA	T-149	M T R F (16 Hours)	8	16
Understanding and Applying AC Drives – Square D	T-177	M T R F (16 Hours)	12	20
Work Zone Safety – IMSA	T-155	M T R F (16 Hours)	8	30
<b>NECA &amp; TRAINING PARTNER SPONSORED 200 LEVEL COURSES</b>				
Basic Estimating of Electrical Construction (NECA-MEI)	T-225	M T R F (32 Hours)	8	20

## 300 Level Courses

These special courses are available to All Groups. (Be sure to check times for conflicts.) The Registration Fee for these courses are NOT included in your normal NTI Registration Fee. The special fee for a 300 Level course is in addition to your NTI Registration.

Course #	Course Title	Days & Hours	Min./Max.	Normal Price	NTI Special Price
T-301	OSHA 502*	7/29-7/31 (20 Hrs)	15/35	\$495.00	\$445.00
T-303	Coyne Instructor Trainer Refresher*	7/31 Sa (8 Hours)	3/20	\$220.00	\$110.00
T-305	Coyne Pediatric Basic Life Support*	8/1 Su (4 Hours)	3/20	\$220.00	\$110.00
T-307	PowerPoint for Instructional Use*	7/30-7/31 (12 Hrs)	15/25	N/A	\$225.00
T-309	AMP ACT I Instructor Update	7/31 Sa (8 Hours)	3/12	N/A	\$195.00
T-311	Craft Certification Performance Evaluation Training	7/29-7/30 (12 Hrs)	10/20	\$250.00	\$200.00

\* Prerequisite applies. See Course Description for additional information

If you are registering for a class that has a prerequisite, the NJATC must have a copy of your applicable completion certificate before you can register for the higher level class.  
**Be sure to FAX a copy of your completion certificate for any required course work to: Melissa Parsly at 865.380.9795.**

## 100 LEVEL COURSES

(All 100 Level Courses are 16 Hours unless specified)

### T101

#### AC and DC Theory Lessons, How to Teach the NJATC

This Train-The-Trainer course is offered to introduce local JATC instructors to the proper methods used for teaching AC and DC Theory using the NJATC curriculum, assorted classroom instructional aids, and hands-on demonstration labs where required. This course concentrates on teaching basic AC and DC Theory using the NJATC *AC Theory* and *DC Theory* Textbooks and Instructor Guides. This class assumes the student has a basic understanding of AC and DC Theory and is designed primarily to satisfy the requirements of the NJATC Master Instructor Certification.

### T103

#### Codeology Course, How to Teach NJATC

This course is intended for instructors teaching the NJATC's Codeology curriculum and for those looking to master the NJATC's Code-related curriculum. The course will cover key concepts contained in the *Codeology* Textbook and curriculum and the manner in which these lessons should be covered with students. Although not provided, the Codeology PowerPoint CD (J207CD) and NJATC Course Presentation Software (A2CDK) will be demonstrated as part of this course. **Participants MUST bring a copy of the 2008 NEC®.**

### T105

#### Conduit Fabrication, How to Teach the NJATC

The Conduit Fabrication course uses the NJATC *Conduit Bending and Fabrication* text. The class will provide a comprehensive overview of conduit bending and fabrication procedures along with instructional delivery methods. All of the Conduit workbook lessons will be reviewed along with the lab manual exercises. The class will utilize the NJATC conduit trainer so that the instructor can become familiar with its design and purpose. Also covered in the course is the functionality of the Course Presentation Software. This software allows the instructor to cover the lessons in a presentation format with a multimedia projector. All conduit lessons will be reviewed in this manner.

**T107****Fiber Optic Installation – Hands-on Training for Instructors****PREREQUISITES: NONE****LENGTH: 16 HOURS**

This 16-hour course is for instructors who currently teach fiber optics or plan to do so in the future. The focus of the course will be on preparation for teaching apprenticeship or journeyman classes using the complete FOA curriculum they receive as part of the course or any other curriculum they choose.

The course will provide training in fiber optic installation practices to prepare them for the FOA CFOT exam, a requirement for FOA instructor certification, and for teaching apprenticeship or journeyman classes using the curriculum they receive as part of the course or any other curriculum. The CFOT is the most widely recognized certification for fiber optic technicians and installers (almost 30,000 CFOTs to date) and is a prerequisite for FOA instructor certification. The course is a basic fiber optic course based on *The FOA Reference Guide to Fiber Optics*, the FOA textbook and the *FOA Online Fiber Optic Reference Guide*, the basis of the FOA CFOT exam. Approximately half the class time will be spent on hands-on activities designed to develop skills in the processes covered.

**T109****Foremanship Concepts for Telecommunications Projects**

This course is designed to provide telecommunications installers and technicians the ability to guide projects to completion. Good project leaders need technical and motivational skills. This course is designed to provide students with tools to complete projects as specified on time and under budget. Documentation practices and the art of managing talent, the customers and workers are demonstrated. This training provides participants the necessary skills to run work from small to large size installations.

**T111****Hazardous Locations Based on 2008 NEC<sup>®</sup> Train-the-Trainer**

This seminar covers the requirements for electrical installations in hazardous (classified) locations. It is primarily based on the provisions set forth in the National Electrical Code (current edition). The material has been developed in the interest of promoting greater understanding and increasing electrical safety for systems in hazardous (classified) locations. This material is ideal for self-study and is also an excellent multimedia program for public presentations and forums. Fundamentals and critical requirements for electrical wiring in hazardous (classified) locations are explained in easily understood language. Hundreds of new and revised color illustrations and photos exemplify the proper use and application of electrical requirements in these locations. ***Participants MUST bring a copy of the 2008 NEC.***

**T113****Health Care Systems Curriculum, How to Teach the NJATC**

It is important that electrical installations meet the requirements of all applicable codes and standards. Not surprisingly, electrical installations in health care facilities require a more careful and focused approach than many other types of electrical installations due to unique requirements and the life safety implications. The How to Teach the NJATC Health Care Systems curriculum will focus on the following topics: general requirements for health care facilities; electrical wiring and protection; patient care locations; protection techniques and methods; essential electrical systems for health care facilities; and, essential electrical systems.

**T115****Instrumentation and Calibration Basics-Using the Fluke-744 Hart Calibrator, How to Teach (Fluke Corp.)**

This hands-on training course will introduce JATC instructors to the Fluke-744 Process Calibrator utilized in the current NJATC Fundamentals of Instrumentation curriculum. Instructors will learn the elements of calibration and maintenance of temperature and pressure transmitters. In addition, instructors will participate in hands-on classroom exercises that reinforce many of the key Fluke-744 functions and will learn extended functions including limit switch testing, indicator calibration, and advanced documenting features.

**T117**

**LED Lighting Simplified – Train-the-Trainer** (*Phillips Lighting*)

As LED lighting continues to advance and become more mainstream, it is imperative that electricians understand and are comfortable with specifying and installing LED lighting systems. This course is designed to provide the knowledge and hands-on experience needed to be successful with this growing technology. This course will utilize the Textbook *LED Lighting Simplified: A Guide for Specifiers and Installers* that is being introduced into the Fourth Year of the Inside Wireman Apprenticeship curriculum. Topics covered include LED basics; LED lighting fixtures; light output; quality of light; useful life; power and control options; applications; and, the business case for LED lighting. In addition, the course will include interactive sessions that will focus on wiring and installing LED lighting systems, incorporating control and programming.

**T119**

**Motor Control using NJATC Curriculum & Training Equipment, How to Teach the NJATC**

This How to Teach Motor Control course focuses on the NJATC's new motor control curriculum. A new text "*Fundamentals of Motor Control*" will be used in this course, along with the companion Instructor Guide/Student Workbook, and Instructor Resource Kit. This new Instructor Resource Kit includes many features including power points, animations, flashcards, etc. to assist the Instructor in teaching motor control. In addition, a new Motor Control Lab Reference Manual will be introduced which will allow JATCs to selectively offer hands-on exercises for their apprentices and Journeymen interested in hands-on training. This lab manual is not designed around any single motor control lab equipment, but is designed to allow a JATC to use the equipment they already have to offer this training.

**T121**

**Orientation Lessons, How to Teach the NJATC**

How to Teach the NJATC Orientation Lessons Train-The-Trainer course is offered to introduce local JATC instructors to the proper methods used for teaching the various subjects found in the *NJATC Orientation Workbook* using the NJATC curriculum and assorted classroom instructional aids. This course concentrates on teaching basic apprentice orientation subjects and issues using the *NJATC Orientation Instructor Guide*. This class assumes the participant has a basic understanding of apprentice orientation subjects and issues and is designed primarily to satisfy the requirements of the NJATC Master Instructor Certification.

**T123**

**Outside Curriculum – AC/DC Theory, How to Teach the NJATC**

Teaching the Outside Curriculum and not comfortable with the AC and DC theory lessons? This course is for you. This course will review basic theory concepts and how to present them to your students in an easy to understand format. First and Second Year theory lessons will be reviewed and discussed. This course will be taught by an Outside Industry instructor.

**T125**

**Outside Curriculum – 1<sup>st</sup> Year Safety/OSHA Lessons, How to Teach the NJATC**

Safety plays an important part of the Outside Line Construction Industry and is also an important part of the NJATC curriculum. This course will cover the safety and OSHA lessons that are part of the new Outside Line Construction Curriculum and help you as an instructor emphasize the importance of understanding and following all safety rules and regulations. There are many lessons throughout the three-year program, and this course will focus on those lessons presented in the new First Year material. Lesson topics reviewed are: Safety Awareness – On the Job; Safety Meetings; Tail-Board Discussions; First Aid; Safety and Health; Understanding Electricity; Electrical Hazard Awareness; Energized and Non-Energized Parts; Rubber Gloves and Sleeves, Care and Use; Protective Line Devices, Care and Use; and, Introduction to OSHA.

**T127**

**Outside Curriculum - 3DInternet Transformer Simulator Lab Exercises, How to Teach the NJATC**

The NJATC outside curriculum will incorporate 3DInternet's transformer simulator into the 2<sup>nd</sup> and 3<sup>rd</sup> Year transformer lessons starting in 2010. 3DInternet's transformer bank simulator training provides training in a "Hyper-Real Environment" allowing the students to fully immerse themselves and interact with multi-situational job-duty scenarios. The lab exercises developed for the NJATC will be covered thoroughly allowing the instructor to return home with the confidence to use and demonstrate the simulator in a variety of scenarios. This is a hands-on class and

everyone will be working through each exercise. Even though this class is focused on the outside curriculum, anyone interested in learning transformer connections and vectoring in a “Hyper-Real Environment” is encouraged to enroll.

**T129****(Overcurrent Protection) Codes & Practices-3 Course, How to Teach the NJATC**

This course is intended for instructors teaching Code and Practices-3, Third Year Inside and those looking to master the NJATC’s Code-related curriculum, as well as those looking for a greater understanding of a wide range of overcurrent protection-related topics. The course will cover key overcurrent protection and electrical safety concepts contained in Code and Practices-3 and the manner in which these lessons should be covered with students. Key topics include overcurrents, overload, short circuits, protective devices, current limitation, component protection, conductor protection, motor circuit protection, transformer protection, selective coordination, electrical safety and much more. In addition, although not provided, the Overcurrent PowerPoint® CD (J233CD) and NJATC Course Presentation Software (A3CDK) will be demonstrated and used as part of this course. **Participants MUST bring a copy of the 2008 NEC®.**

**T131****Power Quality, How to Teach the NJATC**

Power Quality Analysis is a unique requirement that requires detailed understanding of the causes and remedies of Power Quality Phenomenon. This course will provide a detailed look into the possible causes of PQ problems, the equipment use to detect causes, the mitigation requirements and concerns involved with, plus the numerous helpful hints that so often are needed when troubleshooting power distribution systems. This course is 16 hours and will be using the new NJATC textbook developed by our industry for our industry. Plus the author of the textbook will be the instructor.

**T133****Residential Code Lesson, How to Teach the NJATC**

This Train-The-Trainer course is offered to introduce local JATC instructors to the proper methods used for teaching the National Electrical Code® in residential applications using the NJATC Residential Curriculum and assorted classroom instructional aids. This course concentrates on teaching basic residential code issues using the NEC® and the *Electrical Systems* Textbook, accompanied by the 25 lessons in the *Residential Code-2* Workbook, which are customarily taught in the Second and Third Years of a Residential Apprenticeship Program as companion lessons to the *Residential Wiring Practices* lessons. Topics will include specific NEC® issues and requirements related to wiring materials and methods, services, calculations, special installations and overcurrent protection.

**T135****Residential Fire Alarms and Security Systems Lessons, How to Teach the NJATC**

Teaching the NJATC Residential Fire Alarms and Security Systems Lessons Train-The-Trainer course is offered to introduce Local JATC Instructors to the proper methods used for teaching Residential Fire Alarm and Security Systems using the NJATC Curriculum and assorted classroom instructional aids, all built around the NJATC’s *Guide to Residential Fire Alarm and Carbon Monoxide Systems* and Heathkit’s *Security, Access Control and Surveillance* Textbooks. This course concentrates on teaching Residential Fire Alarm and Security Systems using both textbooks, accompanied by the 6 apprentice Fire Alarm Lessons and 6 apprentice and 4 optional or Journeyman Security Systems lessons found in the Third Year of the Residential Curriculum. Topics will range from Residential Fire Alarm and Security System basics including carbon monoxide warning equipment to advanced systems like Closed Circuit Television Surveillance Systems and Residential Access Control Systems.

**T137****Residential Wiring Practices Lessons, How to Teach the NJATC**

This Train-The-Trainer course is offered to introduce local JATC instructors to the proper methods used for teaching residential wiring using the NJATC Residential Curriculum and assorted classroom instructional aids. This course concentrates on teaching residential wiring using the *Electrical Wiring Residential* Textbook, accompanied by the 24 lessons found in the NJATC *Residential Wiring Practices* Workbook, which are customarily taught in the Second and Third Years of a Residential Apprenticeship Program as companion lessons to the Residential Code-2 lessons. Topics will include general and specific residential installation practices including device wiring methods; circuit interrupters; lighting and receptacle branch circuits for specific areas of typical dwelling units; fire alarm and security

systems; swimming pools and spas; service entrance equipment; home automation systems; standby power systems; overcurrent protection; special purpose outlets; and, television and telephone systems.

**T139****Rigging Curriculum, How to Teach the NJATC**

This course will provide the student with an explanation and practical application of rigging vectors and how they are used in the new Outside Line Construction Curriculum. The use of vectors to analyze rigging situations as in the NJATC Outside Lineman course will be covered in detail. You will learn to use vectors to analyze and predict the load tension on structures and equipment of various rigging techniques used in the Outside Line Construction Industry and discuss the rigging hardware/equipment that is used in the First Year Outside/Traffic Signal Curriculum.

**T141****Semiconductor and Digital Electronic Theory Lessons, How to Teach the NJATC**

This Train-The-Trainer course is offered to introduce local JATC instructors to the proper methods used for teaching theory using the NJATC curriculum, assorted classroom instructional aids, and hands-on demonstration labs where required. This course concentrates on teaching basic Semiconductor and Digital Theory using the NJATC Electronic and Digital Trainers and the Theory Textbooks and Instructor Guides. This class assumes the student has a basic understanding of Semiconductor and Digital Theory and is designed primarily to satisfy the requirements of the NJATC Master Instructor Certification.

**T143****Telephony, Installer/Technician, How to Teach the NJATC****24 HOURS**

This course is designed to prepare students to teach Lessons 1 through 14 of the NJATC Installer/Technician Telephony Curriculum, using the associated NJATC workbook, text, assorted classroom instructional aids and selected lab equipment where required to illustrate and demonstrate specific telephony systems applications. Topics covered in this course will include basic terminology and definitions, understanding a telephone system, basic circuitry and wiring, signal types, ISDN, Electronic Key and PBX systems. At the conclusion of this training, it is intended that students will be ready to teach the NJATC Installer/Technician Telephony Curriculum. *NOTE: This course starts on Saturday at 8:00 a.m. for all students, then it will split into AM and PM sessions M, T, R, F. If you sign up for this course, you MUST be in attendance on Saturday.*

**T145****Test Instruments** (*American Technical Publishers & Fluke Corporation*)

This hands-on training course will introduce JATC instructors to a variety of test instruments, their application, functionality, and various troubleshooting techniques. Instructors will learn new techniques and hone existing knowledge using test instruments on equipment that is covered in the NJATC *Test Instrument* Textbook and *Test Instruments Applications Manual*. Common test instrument activities will be blended with practical applications and instructional tips to provide a fun, enjoyable skill-building experience. All participants will take home many ideas for teaching test instruments using the latest equipment and curriculum material.

**T147****Traffic Signal Curriculum – How to Teach the NJATC 2<sup>nd</sup> Year Lessons**

This course is designed to help those instructors teaching the new NJATC Outside 2<sup>nd</sup> Year Traffic Signal curriculum. Whether you are a foreman on a traffic signal project or have never set foot on a traffic signal job, this course will help prepare you to teach the NJATC's new Traffic Signal Curriculum. Focus of this class will be on the Second Year Traffic Signal Job Information lessons. These lessons will be covered in detail with plenty of interaction between the instructor and students. Questions on how to best present this material will be answered. This class will be conducted by the individual who wrote most of the lessons, offering a keen insight into the curriculum.

**T149****IMSA Traffic Signal Level I Certification Course****PREREQUISITES: WORK ZONE SAFETY CERTIFICATION COURSE-IMSA**

This course is the first of three IMSA Traffic Signal Certification Levels. It will provide an introduction to Traffic Control Signals; Signal Justification and Study Requirements; Signal Configuration and Design; Signal Operations Planning and Design; and, the fundamentals of Signal Installation and Maintenance. This course leads to an

examination on Friday for the Traffic Signal Level I Certification. **If you do not have the prerequisite course, you can sign up for Work Zone Safety Certification Course-IMSA (T155) in conjunction with this course.**

### T151

#### **Transformer Applications and Connections, How to Teach the NJATC**

This 16-Hour course will teach Linemen what they need to know in order to perform their job effectively. Even though the class is primarily focused on the Outside Industry, anyone with an interest in teaching transformer theory will benefit from this class. Students will receive an introduction to transformers, its parts and functions and will have the opportunity to build a small transformer in class. Included will be simplified electricity which covers magnetism; AC and DC circuits and electron theory; transformer operation; and, electrical systems. Also included will be transformer connections, delta, wye, rotation, troubleshooting and floating neutral. Safety tips will be a critical portion of this course. **There will be a final exam at the end of the week.**

### T153

#### **Transformers and Motor Theory Lessons, How to Teach the NJATC**

Teaching the NJATC Transformer and Motor Lessons Train-The-Trainer course is offered to introduce local JATC instructors to the proper methods used for teaching theory using the NJATC curriculum, assorted classroom instructional aids, and hands-on demonstration labs where required. This course concentrates on teaching basic Transformer and Motor Theory using the NJATC Transformer Trainer and the Theory Textbooks and Instructor Guides. This class assumes the student has a basic understanding of Transformer and Motor Theory and is designed primarily to satisfy the requirements of the NJATC Master Instructor Certification.

### T155

#### **Work Zone Safety Certification Course - IMSA**

This course will cover all information that will be given on the Work Zone Safety Certification Exam. Topics include: Traffic Control Devices; Hand Signaling Devices; Typical Situations for Construction; Traffic Terminology; Work Zone Traffic Control; and, Safety Review. This class is a prerequisite for all IMSA Traffic Control Certifications. This course can be taken in conjunction with IMSA Traffic Signal Level I Certification Course (T149) if needed for the prerequisite requirement. **This course leads to an examination on Friday for the Work Zone Safety Certification.**

### T157

#### **AMP ACT I – Installing Premises Cabling Systems (Tyco)**

This course offers a unique opportunity for Journeymen to learn the latest connecting techniques for both copper and fiber premises/network cabling. The course includes an overview of cabling systems, the ANSI/EIA/TIA and ISO/IEC industry standards, cable system administration and documentation, and **actual hands-on termination** exercises for UTP, STP and fiber cable. This course is approximately **85% hands-on** and is taught using a systems approach instruction method where the students build and test cable assemblies and then learn how the cable assemblies are utilized in a complete cabling system. UTP and STP hands-on termination exercises include assembling CAT 6 UTP and CAT 6 STP links. Optical Fiber hands-on termination exercises include terminating the following connectors: Epoxy SC, ST LightCrimp XTC no epoxy / polish, CORELINK mechanical splice, MTRJ (a small form factor connector), LightCrimp Plus SC no epoxy / no polish and the LightCrimp Plus LC (a small form factor connector). Tooling will be provided for classroom purposes and each student will receive a course manual and a connector assembly kit for the hands-on section of the course. **Successful completion of the course and course examination will designate the student as an AMP NETCONNECT Registered Installer.** *This course also qualifies the student to receive 14 BICSI CECs towards the renewal of the BICSI Installer or RCDD certification.*

### T159

#### **AMP ACT II – Certifying and Troubleshooting Premises Cabling Systems (Tyco)**

This course features approximately **75% hands-on training** with the appropriate tools and test equipment. Students will obtain the experience necessary to certify and document UTP/copper and fiber optic cable plants. **Each student will also obtain the experience of troubleshooting common problems with installed premise cable plants.** Students receive a course manual that contains extensive documentation including course notes, copies of the presentation slides, certification exercises, troubleshooting exercises and network system parameter charts. This is a unique opportunity for Journeymen to learn how to certify the performance of an installed cable plant and to learn

how to troubleshoot them if they do not perform as expected. Successful completion of this course and course examination will designate the student as an **AMP NETCONNECT Registered Certifier and Troubleshooter**. *This course also qualifies the student to receive 14 BISCIE CECs toward the BISCIE Installer or RCDD certification.*

**T161****Arc Welding Principles, Processes, and Applications** (*Lincoln Electric*)

This 16-hour course will provide the necessary information, lesson materials, and demonstration skills for a practical welding program at your Training Center. Safety, stick welding, TIG welding, MIG welding, and Flux-cored welding will be presented with the emphasis on how to present and demonstrate these topics in your own program. A selection of presentation mediums (transparencies, slides, videos, books, and printed handouts) will be utilized to present the classroom information. Welding demonstrations and safety practices will be demonstrated for each process. Over half of the class time will be hands-on practice with instruction. Certification requirements will also be addressed.

**T163****AutoCAD LT 2011 Level I** (*Ronald A. Williams, Ltd*)

This hands-on course is designed to enable the NTI member to effectively use the basic AUTOCAD LT functions. Upon completion, you will be familiar with the 2D features of LT, be able to identify its power and limitations, confidently create, edit, manipulate, and dimension CAD drawings. Topics included are: file commands, CAD set tools, basic drawing commands, editing ability, layers and CAD construction techniques. The course is beneficial for instructors, Journeymen, and contractors using or working with blueprints and need skills with computer aided drafting techniques.

**T165****AutoCAD LT 2010 – Intermediate PLUS** (*Ronald A. Williams, Ltd*)

The intent of this class is to expand the knowledge and use of AUTOCAD LT beyond the basic functions. Initially a short review will be considered, if needed, and then move forward expanding the knowledge base for everyone. The class will offer many more PLUS features and capabilities offered in AUTOCAD LT. As the class progresses, some mark up, drawing changes, Electrical additions and the like will be explored.

**T167****Digital Video Production for Training Effectiveness** (*American Technical Publishers*)

Video can serve as a powerful instructional media to increase interest and training effectiveness. This presentation will provide an overview of fundamental video production procedures and techniques used for developing video clips. Procedures will be demonstrated using a digital video camera, standard desktop computer, and popular software. An emphasis throughout the presentation will be on tips and techniques for producing professional quality video for use in a typical training program lesson. Hands-on activities will include video clip and inserting into a PowerPoint® presentation.

**T171****First Aid/CPR & AED TTT** (*Coyne First Aid*)

This course prepares the student to teach a basic CPR/First Aid training class. After completion of this course, the student will be certified to teach a First Aid/CPR course that has been officially accepted by the U.S. Department of Labor - Occupational Safety and Health Administration (OSHA). This course will cover the essential steps of CPR and basic First Aid procedures for the following: wounds/bleeding, shock, fractures, burns, eye injuries, seizures, drug overdoses, temperature related problems, and many other job related emergencies.

**T175****The Technology of Medium & High Voltage Cable Splicing & Terminations** (*Tyco Energy*)

This course will provide the student with a complete understanding of this technology. The participant will gain a thorough knowledge of the theory and applications of medium voltage termination and splicing of both heat shrink and cold-applied technology. The topics covered will be cable theory, stress in cables, stress at end of cable when shield is removed when terminating, hands-on installation of materials, why cables are spliced and more. There will be various hands-on exercises and periodic tests to determine comprehension level.

**T-177****Understanding and Applying AC Drives** (*Square D*)

This course teaches the student an overview of AC Drives from basic principles of operation and set-up to a variety of Drives packaging and application possibilities with hands-on labs to experience programming via keypad or PC. Drives issues with motors, load types, braking and noise will be discussed. Drives communications using Ethernet will be discussed and BlueTooth Communications will be demonstrated. PowerPoint presentations along with motor demo cases and a number of different model Drives will be used to teach the function and features commonly used in Drive applications. Students are encouraged to bring their own laptops to use. This is an ideal course for instructors who teach motor control to the apprentice or Journeymen, or anyone who works with AC Variable Speed Drive Equipment.

**200 LEVEL COURSES**

(All 200 Level Courses are 32 Hours unless specified)

**T201****Cable Splicing – Module I, How to Teach the NJATC****LENGTH: 36 HOURS**

This is the first module of the NJATC's four module hands-on cable splicing courses. This course will provide instruction in the different types of cable, specialty tools and materials used in medium to high voltage work (typically 2,000 - 35,000 volts). Cable end preparation is covered and general safety practices will be discussed. This is a hands-on course and all participants will construct several hand-taped 5 kV and 15 kV straight splices and terminations. Materials are presented from several different manufacturers of cable splicing materials. This course is the prerequisite for all the other modules of the NJATC's cable splicing course. **NOTE: This class will meet on Wednesday morning.**

**T203****Cable Splicing – Module II, How to Teach the NJATC****LENGTH: 36 HOURS**

The NJATC's Module II Cable Splicing course introduces the student to several methods of terminating cable, Tee splices, and Protective Grounds. This course expands on the information the student learned and practiced in Module I. The hands-on exercises include the construction of a 5 kV and 15 kV termination and 15 kV Tee splices. Materials are presented from many different manufacturers of cable splicing materials. This course is an outstanding preparation course for the National Cable Splicing Board's (NCSCB) hand-taped certification practical examination. **NOTE: This class will meet on Wednesday morning.**

**T205****Cable Splicing – Module VI, Wind Farm, How to Teach the NJATC****PREREQUISITES: MODULE I OR PREVIOUS CABLE SPLICING EXPERIENCE**      **LENGTH: 36 HOURS**

This NEW NJATC course was developed to teach individuals the skills necessary to splice and terminate cable on a wind turbine project. The students will work with 35 kV cable and components and be exposed to the different types of manufacturer kits (splice and terminating) used on today's wind farm projects. Both cold shrink and heat shrink products will be used in this course. The participants will be taught how to prepare the cable using manufacturer's tools. Safety procedures found in cable splicing and on wind farm projects in particular will be covered. Cross bonding and grounding will also be reviewed. **NOTE: This class will meet on Wednesday morning.**

**T207****Code Calculations Course, How to Teach the NJATC**

The object of this course is to gain a more complete understanding of the NEC<sup>®</sup> by preparing and using detailed calculations in accordance with the 2008 National Electrical Code. Specific training methods used in presenting the NEC material will be stressed during the presentations. The course will showcase the 2008 NJATC textbook and Instructors Guide for the NJATC Code Calculations Based on the 2008 NEC. **NOTE: A battery-operated scientific calculator, notebook, writing material and highlighter is recommended. Participants MUST bring a copy of the 2008 NEC<sup>®</sup>.**

**T208****Electrical Transmission & Distribution Partnership 10-Hour Safety Course TTT (Outside Industry)****PREREQUISITES: OSHA 500****LENGTH: 20 HOURS**

This training features the new Outside Industry Transmission & Distribution OSHA 10-Hour course. Designed by and for the Outside Industry, this course is tailored to the specific needs of linemen, line contractors and other line industry safety professionals. Customized 10-Hour course topics have been reviewed by OSHA and include equipotential grounding and bonding; lifting and rigging; PPE including FR clothing; fall protection; trenching and excavations; confined and enclosed spaces; aerial lift devices; and an in-depth look at a number of parts of 1910.269. Upon completion of this training, authorized OSHA Outreach Trainers can issue OSHA 10-Hour T & D cards to their students.

**T209****Fire Alarm Systems Introduction (Hands-On), How to Teach the NJATC**

This course is intended to prepare students to instruct NJATC Fire Alarm Systems Startup. The course is designed to closely follow NECA 305 and prepare students/instructors for field installation. At the conclusion of this training, it is intended that participants have knowledge of installation, basic troubleshooting and programming of fire alarm controls and field devices.

**T211****Fundamentals of Instrumentation Course, How to Teach the NJATC****36 HOURS****PREREQUISITES: UNDERSTANDING & KNOWLEDGE OF THE FLUKE 744**

This course format includes classroom instruction and a high level of participant-interactive exercises. Exercises involve the complete step-by-step process of the progressions needed to complete the installation and calibration of measurement devices to applicable standards utilized in the Instrument and Controls (I&C) field of work. Classroom participation includes lesson objectives intended to develop the participant's working knowledge of measurement and control concepts, measurement devices, and control fundamentals. Interactive computer-based training (CBT) aids, PowerPoint® presentations, and lesson plans are presented to the participant as instructional aids for classroom participation in their respective Training Center. This course will present the 2nd edition of the NJATC Textbook, *The Fundamentals of Instrumentation* with additional subject matter. **NOTE: This class will meet on Wednesday morning.**

**T213****OSHA 500****PREREQUISITES: OSHA 30-HOUR CONSTRUCTION CARD OR EQUIVALENT****36 HOURS**

More and more programs and contractors are reporting an increasing trend of customers and project managers requiring OSHA cards to work on projects. This course prepares and authorizes instructors to conduct OSHA 10-Hour or OSHA 30-Hour construction courses and issue OSHA 10-Hour or OSHA 30-Hour cards to their students. During the comprehensive coverage of the material, including OSHA's requirements for course content, instructor-friendly audio-visual material and NJATC-developed curriculum and lesson plans are featured. **NOTE: This class will meet on Wednesday morning.**

**T215****Installing Photovoltaic Systems Course, How to Teach the NJATC**

This 32-Hour course is intended for instructors teaching the NJATC course Installing Photovoltaic Systems, and provides an overview of curriculum materials including course textbook, student workbook, lab manual, instructor guide and presentation materials. The course format includes classroom instruction and hands-on interactive exercises, as well as methods to evaluate course instruction and student learning objectives. Lesson plans in the workbook parallel chapters in the text that cover fundamentals of PV systems and equipment and code-compliant installation requirements. Sample lab exercises cover variations on equipment and procedures that are used to meet learning objectives. Emphasis is also placed on how to achieve National Instructor and Practitioner Certification in the field.

**T217****Residential Advanced Technology Lessons, How to Teach the NJATC**

This course is offered to introduce local JATC instructors to the proper methods used for teaching advanced residential systems using the NJATC curriculum, assorted classroom instructional aids and selected lab equipment where required to illustrate and demonstrate specific advanced residential systems applications. This course concentrates on teaching Residential Advanced Technology Systems using Heathkit's® series of Residential Advanced Technology Systems Textbooks (*Residential Cabling Technologies, Residential Audio and Video Systems, Security, Access Control and Surveillance, Automating and Integrating Residential Systems*) accompanied by the 29 lessons found in the NJATC Residential Advanced Technology Workbook. These are the advanced residential technology lessons that are customarily taught in the Third Year of a Residential or Installer/Technician Apprenticeship Program.

**T219****Security Systems Course, How to Teach the NJATC Installer/Technician**

This course is designed to prepare students to teach Lessons 1 through 15 of the NJATC Installer/Technician Security Systems Curriculum, using the associated NJATC workbook, text, assorted classroom instructional aids and selected lab equipment where required to illustrate and demonstrate specific security and access control systems applications. Topics covered in this course will include basic terminology and definitions; security systems overview; magnetic contacts; motion sensing; glass break sensors; control panels and key pads; security system design; introduction to access control; access cards, codes and biometrics; doors, gates, turnstiles and their locking mechanisms; sensor technology, computers and communication; and, EAC system design. At the conclusion of this training, it is intended that participants will be ready to teach the NJATC Installer/Technician Security Curriculum.

**T221****Transformers Course (For Inside Wireman)**

The Transformer course uses the NJATC *Transformers Principles and Applications* Textbook. This course provides a comprehensive overview of transformer operations, maintenance, installation, and troubleshooting. All curriculum lessons will be reviewed along with the supplemental CD that is included with the text. Instruction delivery methods and techniques will also be covered. Topics from the book includes: Transformer Connections, Harmonics, Power Generation/Distribution, Reactors, Isolation Transformers, Autotransformers, Buck-Boost Transformers, Maintenance, and Troubleshooting. Also covered in the course is the functionality of the Course Presentation Software. This software allows the instructor to cover the lessons in a presentation format with a multimedia projector. All Transformer lessons will be reviewed in this manner.

**T223****AMP ACT I (AN AMP ACT<sup>SM</sup> COURSE) Train-the-Trainer (TYCO)****PREREQUISITES: AMP ACT I**

This course covers termination and installation practices according to the TIA/EIA Standards, cable pulling and handling, installation issues such as rough in of closets, boxes and outlets, and administration issues such as documentation and labeling. Participants will receive information on tooling requirements and student materials required to facilitate the course at their local JATC Training Center. Each TTT participant will receive a student course manual, an instructor manual with lesson plans and all of the visual aids (overhead slides) required to conduct the course. **NOTE: This class will meet on Wednesday morning.**

**T225****Basic Estimating of Electrical Construction (NECA-MEI)**

This course is intensive classroom instruction in the fundamentals of estimating electrical construction. It is for those with little or no experience in estimating or those seasoned estimators looking to sharpen their skills. Materials include the Textbook, *Manual of Labor Units*, reference books, sample drawings, and specification and worksheets for each participant. This course is a must for those who find themselves frustrated by the current bid market and continue to question their efforts in compiling a "competitive" bid. The principles taught will help you eliminate careless mistakes which cost your company its very existence. **NOTE: The following items are necessary and should be brought by each attendee of this course: one engineer scale, one architect scale, rotameter with 1/4" and 1/8" scale, counter, calculator, and a set of colored pencils or highlighters.**

**T227****TSLAN 500 Hands-On Fiber Optic Training Course for Local Area Networks****40 HOURS**

This is a five-day hands-on course that prepares craftsmen for all aspects of fiber optic cable installation in a local area network environment. Both multimode and single-mode fiber types are covered. Cable placement; fusion and mechanical splicing; cable termination (connector installation and pigtail splicing); and, acceptance testing are taught with extensive hands-on practice. Students build, test and troubleshoot complete single-mode and multimode systems in this class. Also covered is the use of equipment, hardware and procedures pertaining to building distributed and campus applications. **Please note this course starts on Saturday at 8:00 a.m. for all participants. If you sign up for this course, you MUST be in attendance on Saturday all day.**

**T229****Understanding AC Theory**

This course uses the NJATC *AC Theory* Textbook. AC Theory is the core of the electrical construction world and all electricians must have a complete understanding of the subject. AC theory is required before the student can study courses such as instrumentation, transformers, etc. Due to the large amount of information, the course is broken down into two courses. This course will provide instructional techniques for the basic topics of AC Theory. Also covered in the course is the functionality of the Course Presentation Software. This software allows the instructor to cover the lessons in a presentation format with a multimedia projector. All AC Theory lessons will be reviewed in this manner.

**T231****Understanding DC Theory Course**

This course uses the NJATC *DC Theory* textbook. This class is designed to help instructors understand DC Theory and to gather instructional delivery methods. DC Theory is arguably one of the most important subjects an apprentice will study throughout the apprenticeship and is also theory that is used on a daily basis. This course will provide the instructor with the knowledge to present DC Theory thoroughly in the classroom. The course will cover each lesson and all lab experiments associated with the lesson. Also covered in the course is the functionality of the Course Presentation Software. This software allows the instructor to cover the lessons in a presentation format with a multimedia projector. All DC Theory lessons will be reviewed in this manner. This course will also cover the NJATC errata process and will explain how to use additional tools on the NJATC website.

**T233****Understanding Digital Electronics Course**

This course uses the NJATC Textbook on *Digital Electronics*. The book includes real-world examples along with detailed theory. This class is designed to help instructors understand Digital Electronics and to gather instructional delivery methods. Today, Digital Electronics is replacing nearly everything that used to be based on analog electronics. This course will provide the instructor with the knowledge to present Semiconductors thoroughly in the classroom. Also covered in the course is the functionality of the Course Presentation Software. This software allows the instructor to cover the lessons in a presentation format with a multimedia projector. All Digital Electronics lessons will be reviewed in this manner.

**T235****Understanding Semiconductors Course**

This course uses the NJATC *Semiconductors* Textbook. This class is designed to help instructors understand Semiconductors and to gather instructional delivery methods. Today, semiconductor electronics is the backbone in nearly every electronic device we use. This course will provide the instructor with the knowledge to present Semiconductors thoroughly in the classroom. Also covered in the course is the functionality of the Course Presentation Software. This software allows the instructor to cover the lessons in a presentation format with a multimedia projector. All Semiconductor lessons will be reviewed in this manner.

**300 LEVEL COURSES****T301****OSHA 502****PREREQUISITES: OSHA 500****COST: \$ 445.00****DATES: 7/29 (8AM – 5PM), 7/30 (8AM-5PM), 7/31 (8AM – NOON)****LENGTH: 20 HOURS**

This course is for anyone who holds a current OSHA 500 authorization and wants to meet their upgrade requirement. In addition to now including Disaster Response content, this course emphasizes the recent changes to OSHA 29 CFR Part 1926 Construction Standards and updates on OSHA policies and procedures.

**Participants MUST hold a current OSHA 500 card to take this class.**

**T303****Coyne Instructor Trainer Refresher** (*Coyne First Aid*)**PREREQUISITES: CPR/First Aid****COST: \$110.00****DATES: 7/31/10 (8AM-5PM)****LENGTH: 8 Hours**

The all new course materials incorporate the latest International Guidelines for Cardiopulmonary Resuscitation, public access defibrillation, and our new teaching methodology. The first aid section has also been updated. Due to these extensive improvements, all instructor trainers who have not yet been updated in the new protocols are encouraged to attend.

**T305****Coyne Pediatric Basic Life Support** (*Coyne First Aid*)**PREREQUISITES: CPR/First Aid****COST: \$110.00****DATES: 8/1/10 (8AM-NOON)****LENGTH: 4 Hours**

This course is directed towards providing basic life support to children (infants - 12 years of age). This course takes approximately 4 hours and is a continuation of the CPR/First Aid training provided by Coyne First Aid. Every program should have a trainer qualified to teach pediatric basic life support.

**T307****PowerPoint® for Instructional Use****PREREQUISITES: BASIC COMPUTER KNOWLEDGE****COST: \$225.00****DATES: 7/30 (8AM-5PM), 7/31 (8AM-NOON)****LENGTH: 12 HOURS**

This course is for individuals who have basic computer knowledge, but need to sharpen PowerPoint skills for instructional use. PowerPoint® can help you organize, powerfully illustrate, and professionally deliver your ideas. This course will explore the usefulness and techniques of PowerPoint® in the instructional setting. Some of the course components are working with templates, multi-media, office suite, using toolbars, automations and styles, and how to build an interactive presentation.

**T309****AMP ACT<sup>SM</sup> I – Installing Premises Cabling Systems Instructor Update** (TYCO)**PREREQUISITES: AMP ACT<sup>SM</sup> I Train-the-Trainer****COST: \$195.00****Dates: 7/31/10 (8AM-5PM)****LENGTH: 8 Hours**

This course is for all AMP ACT<sup>SM</sup> I instructors that have not taught the course in the past year. The instructor is brought up to date on the entire course lesson plan. Instructors receive a new instructor's manual, lesson plan, a set of the course slides on a CD, and many helpful hints on how to make their instruction just as effective and informative as possible. This is an 8-hour, one-day class.

**T311****Craft Certification Performance Evaluation Training****COST: \$200.00****Dates: 7/29/10 (1PM-5PM), 7/30/10 (8AM-5PM)****LENGTH: 12 Hours**

This 12-Hour Training will prepare individuals to perform the Craft Certification Incremental (Level 1-5) Performance Evaluations, as well as the 4-Hour (Level 6) Performance Evaluation. Hands-On Evaluations are used to evaluate an individual's skills in electrical system layout and installation. The course focuses on the processes necessary to perform a satisfactory performance evaluation and will provide certification to individuals who need to perform these evaluations. After completing this course, the only additional step an individual will need to be able to conduct evaluations will be to document their Certification Booth through the submission of the Booth Verification Form and submission of specific digital documentation photographs of their completed booth(s). This Class is **NOT** for administering the written Craft Certification Exams.

## **GRADUATION CEREMONY**

**MEMBERS OF THE 2010 GRADUATING** class are required to wear **appropriate attire** to the Graduation Ceremony (coat and tie for the men, semi-formal for the women). Please Remember - **NO COAT, TIE, DARK SOCKS, AND DRESS SHOES AT GRADUATION---NO DIPLOMA!**

**NTI Graduation will be on Thursday, August 5 at 5:30 p.m. at the Hill Auditorium.**

## **PHOTO SESSIONS**

**Graduate Photos** will be prior to the Graduation ceremonies on Thursday, August 5. **ONLY GRADUATING PARTICIPANTS** of the Institute are to have their individual picture taken.

## **GROUP PHOTO**

We will take the group photo, including family members, at the Hill Auditorium on Sunday evening August 1, 2010 prior to the Opening Ceremony. Buses will start transporting participants from the off-campus class areas and hotels at 5:00 p.m. to the Hill Auditorium.

**Technical Course  
cancellations will be  
on June 20<sup>th</sup> if minimum  
enrollment has not  
been met.**