Core Curriculum
Delivering Training for Apprentices

Jim Boyd, PhD – Assistant Executive Director – Electrical Training Alliance

The IBEW, NECA, and the JATC

• One important role which each NECA Chapter and IBEW local union plays is as the co-administrator of the joint Apprenticeship Training Committee (JATC)
• Apprenticeship Standards require that half of the members of each JATC represents labor (IBEW) and half represent management (NECA)
• A very important decision which the Committee participates in making, is in the selection of Advanced Courses which apprentices complete as they move through apprenticeship
• Core Courses are mandatory and do not require any JATC level decisions, except about how to support hands-on activities.
• Local NECA contractors and the IBEW LU are uniquely qualified to be aware of job requirements and training needs in the work area served by the JATC.

APPRENTICESHIP
RELATED TRAINING
ON-THE-JOB TRAINING

900 HOURS MINIMUM
8,000 HOURS MINIMUM
IBEW/NECA Apprenticeship Course Planning

- At the Center of Apprenticeship Curriculum are **CORE** Courses
- **CORE** Courses are those courses which every inside apprentice must complete
- **CORE** courses help apprentices develop the basic knowledge, skill, and abilities which are a part of our industry
- JATCs can move **CORE** Courses around, but each course must be successfully completed for an apprentice to move to JIW Classification
CORE Courses enable apprentices to be productive while they help complete work which is part of different localized markets:

ADVANCED Courses allow training beyond what is covered in the CORE Courses

While CORE Courses provide the basic training needed for all markets, ADVANCED Courses are also required:

- Twenty Eight ADVANCED courses in Eight Different Areas allow JATCs to customize Commercial work focused training
- All courses in a single area can be offered, or JATCs can mix and match courses from different areas to introduce or train for multiple topics
- A minimum number of ADVANCED course credits (40) are required for each apprentice
- JATC may require more than 40 ADVANCED Credits to meet specific local training needs
- JATCs may also focus on areas other than Commercial
While CORE Courses provide the basic training needed for all markets, **ADVANCED** Courses are also required:

- **ADVANCED** courses in Industrial Settings vary by industry and technology
- These courses may include advanced Motor Control, PLCs, Instrumentation, or other technologies
- Many new technologies also require the use of wired or fiber optic networks
- A minimum number of **ADVANCED** course credits (40) are required for each apprentice
- JATC may require more than 40 **ADVANCED** Credits to meet specific local training needs
- JATCs may also focus on other areas

While CORE Courses provide the basic training needed for all markets, **ADVANCED** Courses are also required:

- **ADVANCED** courses for Distributed Generation may include solar photovoltaic, wind or other power generations systems
- New courses are also being developed covering energy storage and microgrids
- All courses in a single area can be offered, or JATCs can mix and match courses from different areas to introduce or train for multiple topics
- A minimum number of **ADVANCED** course credits (40) are required for each apprentice
- JATC may require more than 40 **ADVANCED** Credits to meet specific local training needs
- JATCs may also focus on other areas

While CORE Courses provide the basic training needed for all markets, **ADVANCED** Courses are also required:

- **ADVANCED** courses for Healthcare would include courses identified for the Commercial marketplace but would include other courses designated for healthcare
- Specific healthcare courses are those dealing with special codes and systems which are a part of healthcare systems.
- A minimum number of **ADVANCED** course credits (40) are required for each apprentice
- JATC may require more than 40 **ADVANCED** Credits to meet specific local training needs
- JATCs may also focus on other areas
While CORE Courses provide the basic training needed for all markets, ADVANCED Courses focus on specifics:

- ADVANCED courses for Single-Family and Multi-Family Residential focus on residential systems
- Codes and Standards for residential projects are often different than those for commercial or industrial projects
- JATCs must identify and focus on local codes and practices when selecting residential training
- A minimum number of ADVANCED course credits (40) are required for each apprentice
- JATC may require more than 40 ADVANCED Credits to meet specific local training needs
- JATCs may also focus on other areas

CORE CURRICULUM ADVANCED COURSES

- How Many ADVANCED Courses Are There?
  - Currently there are more than 175 ADVANCED Courses to choose from
  - These include Inside, Outside, Residential, and Installer Technician Courses
  - Some Courses are Soft Skill Courses like the video course “Press One for Service”
  - Some Courses are personal development such as the Lynda.com Adobe Acrobat Essential Training

- Each JATC or Training Director must decide which ADVANCED Courses are best for offering in their JATC Program
- A minimum of 40 Credits of ADVANCED Courses must be completed by each Inside Apprentice to complete the IBEW/NECA Apprenticeship Program

Course Delivery

- The Standards Say:
  - 900 Related Hours
  - 8,000 OT Hours

- So that would be:
  - 180 Hours/Year for 5 Years
  - 1,600 Hours/Year for 5 Years

- Instead, we do:
  - 225 Hours/Year for 4 Years
  - 2,000 Hours/Year for 4 Years
Four-Year Core Curriculum?

- The JATC Has Additional Options
- Standards Define the requirements for our Apprenticeship Programs
  - 900 Hours of Related Training
  - Minimum of 180 Hours Per Year for 5 Years
  - 8,000 Hours of On-the-Job Training
- Does Core Curriculum Define how many Years are required to complete apprenticeship?
  - The answer to that questions is **NO**
  - The **CORE** and **ADVANCED** Courses may be delivered in any timeframe identified by the JATC

Four-Year Core Curriculum?

- Some JATCs have developed a Four-Year Curriculum
  - 225 Hours/Year for 4 Years (Still 900 total Hours)
  - 8,000 Hours of On-the-Job Training
- The syllabus for such a program can be created in the CLCS or Course Level Credit Summary
  - The CLCS is an online tool, available through Training Management System (TMS) which allows JATCs to select and customize their course listing or syllabus
  - Once defined the syllabus can be saved as a PDF and distributed to apprentices, instructors, and the JATC
  - The CLCS is used to plan for a 4-year or 5-year delivery

Core Curriculum in Four Years

- We are going to hear from:
  
  **Rebecca Axford, TD at the Raleigh Durham JATC (Raleigh, NC)**
  
  and
  
  **Tina Williams, TD at the Charlotte JATC (Charlotte, NC)**
Four-Year Curriculum Program

Raleigh-Durham Electrical JATC
Carolinas Electrical Training Institute
Rebecca Axford
Tina Williams

How We Converted To A Four-Year Program

- Accelerated outcomes
- Recruiting power
- Efficiency in resources
- More competitive with our non-union apprenticeships and other programs

- Local and committee approval and support
- Opened the CBA and updated wage scales
- Accelerated current five-year tracks
- Modified the curriculum layout to deliver material in four years
Core Additions to 1st Year

- Torque
- Rigging
- Hoisting
- Signaling
- Codeology
- Conduit Fab (Level 2)

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Core Additions to 2nd Year

- Blueprints | Level 2

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Core Additions to 3rd Year

- Blueprints (Level III)
- Motor Controls (Level I & II)
- Motors (Level I & II)
- Transformers (Level II)

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Core Additions to 4th Year

- Orientation (Level III)
- Code, Standards, Practices (Level 4 & 5)
- Electrical Code Calculation (Level 2)

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Grand Totals

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3rd Year Core Curriculum Model for Apprenticeship
Charlotte NC

3rd Year Core Curriculum Model for Apprenticeship
Charlotte NC

4th Year Core Curriculum Model for Apprenticeship
Charlotte NC

4th Year Core Curriculum Model for Apprenticeship
Charlotte NC

Total Credits = 135.5

Four-Year Program Schedule

Class Year: February – November, holiday breaks
Class Days: Half-day Friday (2pm-6pm), all day Saturday (7am-3pm) – every other week.

Class Year: Mid-August – mid-July, holiday breaks
Class Days: One class a week (4:30p-9:00p), some Saturdays.
Improvements Since The Four-Year Switch

- More attractive program
- Increase in apprentice wages
- Better talent attracted
- Everyone wins

Challenges we have encountered

- Difficulty in accelerating upperclassmen
- Transferring into and out of 4-year program (Charlotte)
- Increased book cost (Raleigh Durham)
- OJT not being realized in four years
- Interim Credential program more difficult to segue way

The Future of our Four-Year Program

- Trump Executive Order
- Competency-based program
Questions?

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Tina Williams
Tina@carolinaseti.com