

BUILDING OFFICIALS ASSOCIATION OF FLORIDA
CROSS TRAINING PROGRAM
SYLLABUS

PROGRAM NAME: Electrical Inspector Training Program
COURSE NUMBER: 5007983

PROVIDER: #0001001
Building Officials Association of Florida, Inc.
528 West Lake Mary Boulevard
Sanford, Florida 32773

PROGRAM TIMETABLE:

Section 1 Coursework - (Online self-paced, instructor monitored)	18 Hours
Section 2 Coursework - (Online self-paced, instructor monitored)	28 Hours
OJT (ride along with qualified field inspector)	<u>154 Hours</u>
Total Program Hours	200 Hours

Note: See expanded timeline in the course outline section

ACHIEVEMENT BENCHMARKS:

Section 1 (18 Hours) self-paced study is presented in a series of modules designed to familiarize the student with terms, definitions, and organization of the code volume being studied. Associated laws and rules and ethics may also be studied in this phase. This phase of the program includes online courses that lead the student through the code volume and may include relevant video clips. Research assignments must be completed and submitted for review by the program instructor. Participation in this phase is recorded in our online campus software database. The instructor is available during this phase via messaging or telephone to answer any questions that the student may have. Traditional classroom hours may be substituted for some or all online hours on a one-for-one basis upon approval of the instructor.

Section 2 (28 Hours) studies are presented as a series of subject matter modules using a traditional classroom multi-media instruction method. Each module presented will include a review of the relevant code provisions and provide explanations of the principles and concepts behind the code. Students must complete all of the modules in this phase of the program, as evidenced by an attendance sheet maintained by the instructor. Participation in this phase may be by in-person attendance or distance attendance using our online virtual classroom.

OJT (154-Hours) studies will be accomplished by the student accompanying a qualified inspector/instructor on field inspections. It will be the instructors' responsibility to explain each inspection to the student, sharing inspection techniques as well as mandatory code compliance inspection requirements. A log of inspections completed each day shall be kept by the student on a form provided by BOAF. Each form shall include the date of the training, number of hours spent making inspections, the location of the inspection and the subject matter inspected. A list of code topics to be included in this phase shall be provided. At least seventy-five percent of the topics on the list must be included in the OJT phase. Each daily log must be completed and signed by the student and the OJT instructor.

INSTRUCTOR QUALIFICATIONS:

Classroom and OJT instructors shall meet the following qualifications:

1. A plans examiner or inspector may teach a course within the scope of his/her license.
2. A four-year college degree or graduate degree in their area of study.
3. A state certified contractor with at least five (5) years of experience in their technical area of licensure.
4. A substantially qualified authority may teach courses within his/her area of expertise.

Potential instructors must submit a resume containing a summary of their qualifications and Florida certification numbers issued by a state agency.

PURPOSE:

This program is offered by Building Officials Association of Florida (BOAF) as an alternative eligibility path to certification in an additional category for participants that qualify per **61G19-7.001(1)** through a comprehensive training program designed to familiarize the student with the provisions of the Florida Building Code relevant to this category, associated laws and rules, inspection techniques and ethical conduct.

PROGRM PARTICIPANTS:

Participants in this program must meet the requirements of 61G19-7.001(1)

PARTICIPANT EVALUATION:

Participants shall be evaluated throughout the program as follows:

1. Assignment submittals will be evaluated by the instructor for completeness, effort and accuracy.
2. Quizzes will be administered periodically during the online and classroom phases of the program.
3. Instructors shall complete an evaluation of the students participation in the classroom or OJT phases of the program.

PROGRAM REQUIREMENTS:

The program has two distinct components:

1. 46 Hours of structured instruction in a Blended Learning Program that includes Monitored Online Training, Research Assignments, and Instructor Led Classroom Training
2. 154 Hours of structured "On-the-Job" training

Reference materials shall include:

1. FBC-Electrical (NEC 2011 Edition)
2. FBC-Residential Volume
3. FBC-Existing Building Volume
4. FBC-Accessibility Code Volume
5. FBC-Energy Code Volume
6. Florida Laws and Rules (112, 469, 471, 481, 489, 553, 713)

DOCUMENTATION

The following documents are required to be submitted to BOAF upon completion of training:

1. Application for Admission to the Program (Submitted by the student prior to beginning training)
2. Classroom Instructor Qualification Forms (Completed by BOAF)
3. OJT Instructor Qualifications Forms (Submitted by the student with the application for potential OJT instructors)
4. Instructors Evaluation and Certification (Completed and submitted by the student's satisfactory completion of requirements)
5. OJT Daily Inspection Log (Completed for each day of training during the OJT Phase)
6. Student's Affidavit of Program Completion (Submitted with OJT documents when all training is complete)
7. Post Application

PROGRAM COMPLETION CERTIFICATE:

A Program Completion Certificate will be issued to the participant by BOAF upon determination that all of the training requirements have been met and documented.

PROGRAM OVERSIGHT

Administration of this program is the responsibility of BOAF staff, with oversight by the BOAF Certification Committee.

BUILDING OFFICIALS ASSOCIATION OF FLORIDA CROSS TRAINING PROGRAM

Electrical Inspector Cross Training Program Course List

This program is offered online in three sections: Section One is eighteen hours of credit online. Section Two is twenty-eight hours of credit online. Section Three is On-The-Job Training for one hundred and fifty-four hours.

To complete the online sections of the Electrical Inspector Cross Training Program, the student must complete both Section One and Section Two. Courses are specified as follows:

SECTION ONE – 18 Hours

This section provides basic information important to inspectors, including inspector skills, ethics, law, and other pertinent topics.

Developing Inspector Skills Course: 7 hours - *(This course is a required course for all Cross Training Programs)*

Course Description: This course addresses the soft skills that are essential for construction inspectors to excel in their mission to ensure safe, code-compliant buildings for the public. After completing this course, participants will be able to exhibit non-technical traits, positive behaviors, and problem-solving skills to enhance their ability to interact with others and carry out effective communication, diplomacy, customer service and public relations skills.

Ethics in Construction Course: 1 hour - *(This course is a required course for all Cross Training Programs)*

In this course, students will review ethics and how to deal with the public, the business concerns and the government in a proper and ethical manner.

Laws and Rules for the Building Officials Course: 2 hours - *(This course is a required course for all Cross Training Programs)*

In this course, the student will not only review the existing laws and rules concerning building officials and the building inspector vocation, but also look at new laws and rules.

Communication Skill, 1 hour - *(This course is a required course for the Plumbing, Mechanical and Electrical Inspector and Plans Examiner Cross Training Programs)*

In this course, the student will learn and practice both written and communication skills necessary for an inspector.

Inspection and Plan Review Techniques, 2 hours - *(This course is a required course for the Plumbing, Mechanical and Electrical Inspector and Plans Examiner Cross Training Programs)*

In this course, students learn the tricks and techniques for reviewing plans as well as specific techniques for successfully completing inspections.

Specific Electrical Items and Electrical Safety, 2 hours - *(This course is a required course for the Electrical Inspector and Plans Examiner Cross Training Programs)*

Introduction to Article 90, 1 hour - *(This course is a required course for the Electrical Inspector and Plans Examiner Cross Training Programs)*

This course will familiarize the student with the National Electrical Code and provide information that will allow the student to effectively use it in inspections.

Solar Photovoltaic Systems and Alternative Energy Systems, 1 hour - *(This course is a required course for the Electrical Inspector and Plans Examiner Cross Training Programs)*

This course will introduce solar photovoltaic systems and other alternative energy systems that inspectors may find.

Tables in Chapter 9, 1 hour - *(This course is a required course for the Electrical Inspector and Plans Examiner Cross Training Programs)*

This course will familiarize the student with the tables found in Chapter Nine of the National Electrical Code regarding conduits, conductor dimensions and properties, and power source limitations. Students will also familiarize themselves with Metric / Standard measurements and conversions related to the tables.

SECTION TWO – 28 Hours

Section Two provides specific information from the International Code.

Introduction to Section Two, 1 hour

Requirements for the Electrical Installations, 1 hour

Chapter One, Article 110

Wiring, Protection and Grounding, 7 hours

Chapter Two, Articles 200, 210, 215, 220, 230, 240 and 250

Wiring Methods and Materials, 8 hours

Chapter Three, Articles 300, 310, 312, 314, 320, 342, 344, 348, 352, 356, 358, 376, and 392

Equipment for General Use, 3 hours

Chapter Four, Articles 400, 404, 406, 408, 440, 450 and 480.

Special Occupancies, 3 hours

Chapter Five, Articles 500, 501, 503, 517, 518, 545-590

Special Equipment and Conditions, 3 hours

Chapter Six, Article 680; Chapter Seven, Articles 700 and 705

Florida Energy Conservation, 2 hours

Commercial and Residential Requirements and Efficiency

SECTION THREE – 154 Hours

Section Three provides documented on-the-job training for the student candidate. On-the-job training is verified by the BOAF Certification Committee prior to awarding credit.

WORK EXPERIENCE

This section must be completed fire marshal, or building code administrator, who has personal knowledge of the applicant's experience for the period of time listed below.

Instructions:

Provide employment verification for the years of experience required for qualification for entrance in the BOAF Cross Training Program. Attach additional copies of this page as necessary.

Applicant Name:

Employing Agency/Company Name:

Agency/Company Address:

Dates of employment by Agency/Company	Date (From)	Date (To)
	/ /	/ /

Agency/Company Phone Number:

Position of Applicant:

Describe in detail the applicant's duties, including hands-on, supervisory or management responsibilities. Please be specific when explaining the applicant's duties and hands-on experience.

I attest that the applicant named above has been employed by the agency/company in a: **(Check One)**
supervisory managerial trade position for _____years

Print name of fire marshal, or building code administrator
verifying employment and experience: _____

License Number of person verifying employment and experience: _____

Signature of person verifying employment and experience: _____

Date: _____

CROSS TRAINING
ELECTRICAL INSPECTOR OJT CHECKLIST
BCAIB Provider # 0001001 Training Program # 5007983

Applicant Name: _____

ONLY THE CURRENT EDITION OF THE BOAF OJT CHECKLIST WILL BE ACCEPTED

Please check the website at <http://www.boaf.net/training.html> to be sure you are submitting the most current edition of the applicable form. Each form becomes effective on the revision date contained on the form. Training completed prior to that date may be submitted on the previous form.

This training program requires 46 hours (minimum) of classroom training as approved by BOAF.

This training program also requires 154 hours (minimum) of properly documented On - Job - Training (OJT) with a **Florida Standard Licensed Electrical Inspector** Trainer as evidenced by this and other required forms, including the notarized trainers affidavit.

A. Extensive training on all aspects of electrical systems should include both residential and commercial sections of the code as scripted by the following:

- | | |
|---|--|
| 1. Basic Electrical Theory | 7. Code Administration and Inspection Procedures |
| 2. General Requirements & Fundamentals | 8. Electrical Theory |
| 3. Residential Wiring Methods & Inspections | 9. Electrical Services |
| 4. Appliances, Devices and Motors | 10. Special Occupancies |
| 5. Grounding | 11. Special Circuits and Equipment |
| 6. Swimming Pools | 12. Wiring Methods and Installation |

B. Trainees must mark each item trained on, and initial in the spaces provided on the OJT checklist, when each training segment has been completed.

C. Trainees must also include the approximate percentage of the total number of hours spent in OJT for each segment.

CROSS TRAINING
ELECTRICAL INSPECTOR OJT CHECKLIST
BCAIB Provider # 0001001 Training Program # 5007983

ELECTRICAL INSPECTION OJT CHECKLIST

My specific On the Job Training (OJT) has included instruction on the following items as indicated by "X"

Rough Electrical Inspection OJT Checklist:

- | | |
|---|---|
| <input type="checkbox"/> Wire size, type, & securing | <input type="checkbox"/> Required circuits |
| <input type="checkbox"/> GFCI/AFCI circuits | <input type="checkbox"/> Small appliance circuits |
| <input type="checkbox"/> Lighting circuits | <input type="checkbox"/> Emergency circuits |
| <input type="checkbox"/> Smoke detector circuits | <input type="checkbox"/> Misc. "dedicated" circuits |
| <input type="checkbox"/> Buried/underground circuits | <input type="checkbox"/> Required lighting |
| <input type="checkbox"/> Required servicing receptacles | <input type="checkbox"/> Receptacle spacing (habitable rooms) |
| <input type="checkbox"/> Receptacle spacing (counter tops) | <input type="checkbox"/> Required outside receptacles |
| <input type="checkbox"/> Approved boxes & boxfill | <input type="checkbox"/> Accessible J-boxes |
| <input type="checkbox"/> Conduit type, support, & termination | <input type="checkbox"/> Conduit bond & fill |
| <input type="checkbox"/> Wire protected in attic | <input type="checkbox"/> Nail plates - clear of sharp edges |
| <input type="checkbox"/> Wiring below 8' aboveground | <input type="checkbox"/> Buried cable, plain & conduit |
| <input type="checkbox"/> Bending radius & kinks | <input type="checkbox"/> Corrosion inhibitor required |
| <input type="checkbox"/> Panel protection & clear space | <input type="checkbox"/> Approved "grounding" system |
| <input type="checkbox"/> Required bonding | <input type="checkbox"/> Required disconnects & locations |
| <input type="checkbox"/> Wiring terminated in box | <input type="checkbox"/> Boxes all made up per code |
| <input type="checkbox"/> Computer systems | <input type="checkbox"/> Cable supports |
| <input type="checkbox"/> Pool equipment bonding | <input type="checkbox"/> Pool metal bonding |

Approximate percent of total training hours spent on this segment _____% Initials _____

Final Electrical Inspection OJT Checklist:

- | | |
|---|---|
| <input type="checkbox"/> All electric trimmed or bugged | <input type="checkbox"/> Required lighting |
| <input type="checkbox"/> Working & identified GFCI/AFCI | <input type="checkbox"/> Breakers identified & sized |
| <input type="checkbox"/> Panels/disconnects covered/secured | <input type="checkbox"/> Panel/disconnect clearance |
| <input type="checkbox"/> Grounding system complete | <input type="checkbox"/> Neutrals isolated in sub-panels |
| <input type="checkbox"/> Lightning protection | <input type="checkbox"/> Wire color coding |
| <input type="checkbox"/> Wire connections per code | <input type="checkbox"/> Overhead clearance |
| <input type="checkbox"/> Underground depth | <input type="checkbox"/> Light fixture clearance/protection |
| <input type="checkbox"/> Equipment bonding | <input type="checkbox"/> Equipment loads identified |
| <input type="checkbox"/> Flood elevation clearance | <input type="checkbox"/> MH sections bonded together |
| <input type="checkbox"/> Well casing bonded | <input type="checkbox"/> Special conditions |
| <input type="checkbox"/> Pool equipment bonding | <input type="checkbox"/> Smoke Detectors Operational |

Approximate percent of total training hours spent on this segment _____% Initials _____

**CROSS TRAINING
ELECTRICAL INSPECTOR OJT CHECKLIST**
BCAIB Provider # 0001001 Training Program # 5007983

Temporary Pole Inspection OJT Checklist:

- | | |
|---|--|
| <input type="checkbox"/> Required height with stable post & mast
<input type="checkbox"/> GFCI protection
<input type="checkbox"/> Required grounding system
<input type="checkbox"/> Good working condition | <input type="checkbox"/> Post bracing adequate
<input type="checkbox"/> Secure & bonded panels
<input type="checkbox"/> Required conductor size & type |
|---|--|

Approximate percent of total training hours spent on this segment _____ % Initials _____

Total Hours on All segments _____ hours

Trainee and Trainer(s) should sign this form after all segments of OJT Training has been completed. Include all Trainers that have trained on the hours shown on the Checklist.

By affixing our signatures and BCAIB (BN/PX) numbers below, we affirm and attest the above specific areas and hours of Electrical Inspection Training have been successfully completed.

Trainee	____/____/____ Date Completed	BCAIB #
Electrical Trainer	____/____/____ Date Completed	BCAIB #
Electrical Trainer	____/____/____ Date Completed	BCAIB #
Electrical Trainer	____/____/____ Date Completed	BCAIB #
Electrical Trainer	____/____/____ Date Completed	BCAIB #
Electrical Trainer	____/____/____ Date Completed	BCAIB #

BOAF Trainer's Affidavit

This form must be included in the foundation/cross training application package. Every Building and Fire Official overseeing training must sign and have notarized an individual affidavit with their name and the name of the trainee for each trainee under their supervision.

I, _____,
(Printed or Typed Name of Trainer)

certify that I personally and professionally trained

I, _____,
(Printed or Typed Name of Trainee)

to the best of my ability and believe him / her to be competent and knowledgeable in the areas that I have instructed him / her in as indicated on the associated OJT Training Report(s) and OJT Checklist. To the best of my knowledge, the training I provided under the direction of my Building Official meets or exceeds the requirements of the BOAF Cross Training Program as indicated on the associated training forms, checklists and logs in the area of

_____ inspector / plan review
(fill in technical area and circle the appropriate category)

Additionally, I state the training provided to the Trainee supports the BOAF Mission Statement and the training was provided in compliance with the BOAF Code of Ethics as adopted by the Building Officials Association of Florida.

Trainer Signature _____ BCAIB # _____

Printed Name _____ Date ____/____/____

Total hours trained _____

SIGNATURE MUST BE NOTARIZED: Place notary information in this area as required by law:

ON JOB TRAINING (OJT) REPORT

Applicant Name & BN/PX # (Print) _____ Signature _____

Trainer Name & BN/PX # (Print)		Signature			
Date of Inspection	Occupancy Classification (FBC)	Permit # or Address	Inspection/Review - Be Specific Provide description from Checklist, Not Just Codes! Use as many rows as necessary	Time (Nearest 1/4 of an hour)	Trainer Approval (must be signed for each training)