

BUILDING OFFICIALS ASSOCIATION OF FLORIDA
CROSS TRAINING PROGRAM
SYLLABUS

PROGRAM NAME: Mechanical Inspector Training Program
COURSE NUMBER: 5007985

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)	20 Hours
Section 2 Coursework - (Online self-paced, instructor monitored)	20 Hours
OJT (ride along with qualified field inspector)	<u>160 Hours</u>
Total Program Hours	200 Hours

Note: See expanded timeline in the course outline section

ACHIEVEMENT BENCHMARKS:

Section 1 (20 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 (20 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 (160-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.

PROGRAM PARTICIPANTS:

Participants in this program must meet the requirements of FAC 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 student's participation in the classroom and OJT phases of the program.

PROGRAM REQUIREMENTS:

The program has two distinct components:

1. 40 Hours of structured instruction in a Blended Learning Program that includes Monitored Online Training, Research Assignments, and Instructor Led Classroom Training
2. 160 Hours of structured "On-the-Job" training

Reference materials shall include:

1. FBC-Mechanical Volume
2. FBC-Residential Volume
3. FBC-Fuel Gas Volume
4. FBC-Existing Building Volume
5. FBC-Accessibility Code Volume
6. FBC-Energy Code Volume
7. 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 Cross Training Program Sub-Committee.

BUILDING OFFICIALS ASSOCIATION OF FLORIDA CROSS TRAINING PROGRAM

Mechanical Inspector Cross Training Program Course List

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

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

SECTION ONE – 20 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.

Combustion Air, Chimneys and Vents, 3 hours - *(This course is a required course for the Mechanical Inspector and Plans Examiner Cross Training Programs)*

In this course, students will understand the requirements and code for chimneys and vents, as well as handling of combustion air.

Solar Systems, Pool and Spa Heaters, 4 hours - *(This course is a required course for the Mechanical Inspector and Plans Examiner Cross Training Programs)*

In this course, students will study the requirements and code for solar systems, pool heaters and spa heaters.

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.

SECTION TWO – 20 Hours

Section Two provides specific information from the International Code.

Introduction to Section Two, 1 hour

General Regulations for Mechanical Inspectors, 2 hours

Chapter 3

Ventilation, Exhaust Systems and Ducts Systems, 6 hours

Chapters 4, 5 and 6

Specific Appliances, Boilers, Water Heaters and Pressure Vessels, 3 hours

Chapters 9 and 10

Refrigeration, 2 hours

Chapter 11

Hydronic Piping, Fuel Oil Piping and Storage, 2 hours

Chapters 12 and 13

Florida Building Code for Residential, 2 hours

Florida Building Code for Fuel Gas, 2 hours

SECTION THREE – 160 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.

CROSS TRAINING
MECHANICAL INSPECTOR OJT CHECKLIST
BCAIB Provider# 0001001 Training Program # 5007985

Applicant Name: _____

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

Please check the website at www.boaf.net 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 40 hours (minimum) of classroom training as approved by BOAF.

This training program also requires 160 hours (minimum) of properly documented On-The-Job Training (OJT) with a **Florida Standard Licensed Mechanical Inspector** Trainer as evidenced by this and other required forms, including the notarized trainer's affidavit.

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

- | | |
|---|------------------------------|
| 1. Air Conditioning Systems and Equipment | 7. Exhaust Systems |
| 2. Heating Systems | 8. Smoke Control |
| 3. Fuel Systems | 9. Boilers and Water Heaters |
| 4. Combustion and Venting | 10. Refrigeration |
| 5. Mechanical Piping Materials and Fittings | 11. Special Systems |
| 6. Duct and Venting Systems | 12. Piping Systems |

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
MECHANICAL INSPECTOR OJT CHECKLIST
BCAIB Provider# 0001001 Training Program # 5007985

MECHANICAL INSPECTION OJT CHECKLIST

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

Rough Mechanical Inspection OJT Checklist:

- | | |
|--|---|
| <input type="checkbox"/> Approved materials | <input type="checkbox"/> Duct connections & support |
| <input type="checkbox"/> Sized per manual "D" & "J" | <input type="checkbox"/> Register locations & size/plan |
| <input type="checkbox"/> "Flex" extension & radius | <input type="checkbox"/> "R" value to code |
| <input type="checkbox"/> Return air plenum And mechanical closet | <input type="checkbox"/> Equipment platforms & access |
| <input type="checkbox"/> Lighting & servicing electric | <input type="checkbox"/> Drip pan overflow protection |
| <input type="checkbox"/> Bath exhaust fan requirements | <input type="checkbox"/> Exhaust discharge locations |
| <input type="checkbox"/> Dryer vent material & distance | <input type="checkbox"/> Non-screened termination |
| <input type="checkbox"/> Range hood material & joints | <input type="checkbox"/> Commercial hoodengineered |
| <input type="checkbox"/> Discharge/intake locations | <input type="checkbox"/> Fireplace & chimney clearance Chimney Height |
| <input type="checkbox"/> Combustion Air | <input type="checkbox"/> Gas piping materials & joints |
| <input type="checkbox"/> Gas piping support & size | <input type="checkbox"/> Gas vent materials & joints |
| <input type="checkbox"/> Gas vent clearance | <input type="checkbox"/> Gas appliance protection |
| <input type="checkbox"/> Gas appliance locations | |

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

Rough Mechanical Inspection OJT Checklist:

- | | |
|--|---|
| <input type="checkbox"/> Turning Vanes | <input type="checkbox"/> Testing of pipingsystems |
| <input type="checkbox"/> Confined space ventilation | <input type="checkbox"/> Duct insulation |
| <input type="checkbox"/> Gas piping pressure | <input type="checkbox"/> Exhaust termination/propertyline |
| <input type="checkbox"/> Heating system requirements | <input type="checkbox"/> Heating/cooling piping |
| <input type="checkbox"/> Other fuel systems | |

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

Final Mechanical Inspection OJT Checklist:

- | | |
|---|---|
| <input type="checkbox"/> Gas appliance protection | <input type="checkbox"/> Gas vents complete |
| <input type="checkbox"/> Combustion Air | <input type="checkbox"/> Confined space requirements |
| <input type="checkbox"/> Range hood sealed | <input type="checkbox"/> Dryer discharge non-screened |
| <input type="checkbox"/> Commercial hood system | <input type="checkbox"/> Duct insulation |
| <input type="checkbox"/> Fire dampers | <input type="checkbox"/> Smoke control tested |
| <input type="checkbox"/> Solar system | <input type="checkbox"/> Plenum penetration |
| <input type="checkbox"/> System balancing | <input type="checkbox"/> Equipment servicing needs |

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

CROSS TRAINING
MECHANICAL INSPECTOR OJT CHECKLIST
 BCAIB Provider# 0001001 Training Program # 5007985

Final Mechanical Inspection OJT Checklist:

- | | |
|---|--|
| <input type="checkbox"/> Flood requirements | <input type="checkbox"/> Duct clearance from grade |
| <input type="checkbox"/> Gas appliance set w/shut-off | <input type="checkbox"/> Access to equipment |
| <input type="checkbox"/> Equipment & Ducts complete | <input type="checkbox"/> Chases sealed |
| <input type="checkbox"/> Equipment clearance | <input type="checkbox"/> Condensate drainage |

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 have 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 Mechanical Inspection Training have been successfully completed.

Trainee	____/____/____ Date Completed	BCAIB#
Mechanical Trainer	____/____/____ Date Completed	BCAIB#
Mechanical Trainer	____/____/____ Date Completed	BCAIB#
Mechanical Trainer	____/____/____ Date Completed	BCAIB#
Mechanical 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:

