# Department of Agriculture and Consumer Services



# **Table of Contents**

CONTINUING EDUCATION UNIT (CEU) PROVIDER APPROVAL	4
TERMS FOR CEU PROGRAM APPROVAL	4
PROGRAM AUDITING	7
CEU OBJECTIVES	8
AGENDA EXAMPLE	10
ADA - REASONABLE ACCOMMODATION POLICY	12
ENTOMOLOGY PROGRAM, CHAPTER 482, FLORIDA STATUTES	14
RECIPROCITY FOR CHAPTER 482 LICENSES AND CERTIFICATES	14
COMMON CEU OBJECTIVES BY CATEGORY	14
482 CORE	14
GENERAL HOUSEHOLD AND RODENT	15
LAWN AND ORNAMENTAL	15
TERMITE AND OTHER WOOD-DESTROYING ORGANISMS	16
FUMIGATION	16
LIMITED CERTIFICATION FOR GOVERNMENTAL/PRIVATE APPLICATORS	17
LIMITED CERTIFICATION FOR COMMERCIAL LANDSCAPE MAINTENANCE PERSONNEL	18
LIMITED CERTIFICATION FOR URBAN LANDSCAPE COMMERCIAL FERTILIZER APPLICATION	18
LIMITED CERTIFICATION FOR COMMERCIAL WILDLIFE MANAGEMENT PERSONNEL	19
BEE ERADICATION OR REMOVAL – SPECIAL NOTE	19
PESTICIDES PROGRAM, CHAPTER 487, FLORIDA STATUTES	21
RECIPROCITY FOR CHAPTER 487 LICENSES AND CERTIFICATES	21
COMMON CEU OBJECTIVES CHAPTER 487 BY CATEGORY	22
487 CORE	22
AGRICULTURAL ROW CROP PEST CONTROL	22
AGRICULTURAL TREE CROP PEST CONTROL	23
AGRICULTURAL ANIMAL PEST CONTROL	23
PRIVATE APPLICATOR AGRICULTURAL PEST CONTROL	24
SOIL AND GREENHOUSE FUMIGATION	25
RAW AGRICULTURAL COMMODITY FUMIGATION	25
FOREST PEST CONTROL	25
ORNAMENTAL AND TURF PEST CONTROL	26
SEED TREATMENT	26

AQUATIC PES	ST CONTROL	26
ORGANOTIN	ANTIFOULING PAINT PEST CONTROL	27
RIGHT OF WA	AY PEST CONTROL	27
WOOD TREA	TMENT	27
CHLORINE GA	AS INFUSION	28
SEWER ROOT	T CONTROL	28
REGULATORY	Y PEST CONTROL	28
AERIAL APPLI	ICATION	29
REGULATORY	Y INSPECTION AND SAMPLING	29
NATURAL AR	REAS WEED MANAGEMENT	29
DEMONSTRA	ATION AND RESEARCH	30
ENTOMOLOGY PR	ROGRAM, CHAPTER 388, FLORIDA STATUTES	31
RECIPROCITY FO	OR CHAPTER 388 LICENSES AND CERTIFICATES	31
COMMON CEU	OBJECTIVES CHAPTER 388 BY CATEGORY	31
PUBLIC HEAL	TH PEST CONTROL	31
OUT OF STATE PR	OGRAMS	33
CLASSROOM TRAI	INING – COURSE DESIGN AND STRUCTURE	34
ONLINE AND POLY	YCOM RECERTIFICATION TRAINING – COURSE DESIGN AND STRUCTURE	<u> </u>
	NCE/MAGAZINE ARTICLE/CD/DVD RECERTIFICATION TRAINING – COURS	

# **CONTINUING EDUCATION UNIT (CEU) PROVIDER APPROVAL**

A person wishing to become a CEU provider in Florida is evaluated as a part of the CEU program submission with the completion of the form (FDACS 13326). This process requires documentation attesting that the instructors or speakers possess the expertise required to impart the specified information to the attendees.

As part of this process, providers must also agree to the terms established by the Department and presented below. A provider must have reached the age of majority.

#### **TERMS FOR CEU PROGRAM APPROVAL**

The Department is committed to ensuring that applicators and certificate holders get appropriate continuing education for time spent learning and that courses from all providers are reviewed in a consistent manner.

The Department's responsibilities related to continuing education are:

- Authority to design, create and modify a continuing education program including policies and procedures
- Authority to review and approve or reject continuing education courses, or to approve for fewer hours and/or categories than were requested
- Authority to ask for additional information in order to complete the application or to clarify the application subject matter, course content or hours
- Assigns all course program numbers
- Authority to audit and evaluate continuing education classes
- Authority to audit continuing education records of providers and applicators or certificate holders when they renew
- Provides continuing education providers with copies of approvals, program numbers, and hours awarded

The provider must comply with the following criteria:

- 1. Forms and program information must be submitted at least 3 weeks before the program. All programs must be approved **BEFORE** the presentation in order to receive CEU credits. A program is valid for a one year period. The program can have an unlimited number of classes taught or presented during the valid time period of the program, as long as the program agenda/course content is not modified.
- 2. The subject matter to be presented for CEU credit must relate directly to the certification standards. Once the program is approved by the Department, providers/instructors cannot deviate or alter the program contents or agenda, without re-submitting it to Department for review.
- 3. The provider must submit each of the following to allow for verification of program content, applicability, and assignment of CEU credits:
  - Program requests must include the number of contact hours and categories being requested.

- Program agendas must include a brief description of the specific program contents and estimated instruction time for each objective. No one line agendas will be accepted.
- At least one class must be added before a program can be approved.
- Experience/background documentation must demonstrate the expertise of each instructor or presenter (brief resume), if other than the provider, unless the instructor is an approved provider. The individual's title is not sufficient
- 4. The instructors or presenters must possess the expertise required to impart the specified information to the attendees.
- 5. Training Delivery. Programs that do not comply with these requirements will not be recognized and CEU credits will not be awarded.
  - Students are defined as those attending a class. Trainers or instructors are not considered students. Therefore, the trainer or instructor must NOT include their name on the student roster and is ineligible to receive CEU credit for their own program.
  - Attendance. To receive the Attendance Verification Record, the student must attend and complete the entire class, including all requisite topics and the minimum number of contact hours.
- 6. The Department awards 1 hour of CEU credit for each 50 minutes of instruction time. (For the Bureau of Compliance Monitoring and the Public Health category, a 0.5 hour of CEU credit may be awarded for each 30 minutes of demonstration time.)

Break and Lunch Periods. At a minimum, a 10-minute break period must be provided after every 2 hours of instruction. A lunch period of at least 30 minutes must be provided for each training session which lasts for more than 6 hours. The lunch period is intended as a break period, training is not allowed during this time.

- 7. Providers cannot discriminate against attendees by race, color, religion, gender, or age but Providers are authorized, with CAUSE, to:
  - Revoke the credits or hours assigned to an attendee
  - Reduce the credits or hours assigned to an attendee
  - Refuse to provide the credits or hours assigned to an attendee
  - Eject or have anyone removed from their program/classroom
     Some examples of valid cause or reasons include but are not limited to class disruption;
     frequent absence from the class; any form of class distraction including reading books,
     magazines, and newspapers; or utilizing electronic devices for any purpose other than note taking; and sleeping during the program.
- 8. Provider Code of Conduct. Providers must conduct themselves professionally at all times during the training and at lunch and breaks. The following are examples of unacceptable behavior:
  - Inappropriate Behavior or Activities. This includes serving alcohol, suggesting how to circumvent State regulations, or acting in an unprofessional manner.
  - Lack of Professionalism. This includes discriminatory or defamatory remarks regarding the State, Department, or any individual or group of individuals.

- Offensive Humor or Anecdotes. This includes telling jokes that could be considered offensive, insulting, humiliating, or demeaning.
- Improper Class Setting. This includes holding training at a place not conducive to training.
- Advertising or Sales Promotion of Products. Designing the program to promote a single product, to the detriment of any other available products with similar properties or mode or action.
- Providers are prohibited from receiving attendance credits at programs where they are also the trainer or instructor.
- 9. The Record of Attendance (FDACS13325) must show the name, address, applicator license number, date, and sign-in and sign-out times for each program or class for an attendee desiring CEU credit. All information on the record must be legible.
- 10. The attendee (applicator) will receive the original copy of the Record of Attendance form following the program or class attended. It is the responsibility of the applicator to keep these records of CEUs earned until license renewal time! Record of Attendance forms, being used for credential renewal, will not be forwarded to FDACS directly by the Provider.
- 11. The Provider may keep copies of attendance forms they've issued. Providers, for a one year period, are required to supply a duplicate copy of an attendance record to a class attendee, upon request. It is the provider's responsibility to enter all attendees into the secure CEU website within two weeks of the completion of the course.
- 12. Authorized Department agents may audit/attend any approved CEU session unannounced and without payment for any associated registration fee. If these agents desire to earn CEU credits while monitoring approved training programs, they must follow the same registration protocol (including fees, if any) as any other class attendee.
- 13. All CEU Program Requests must be submitted via the Department's Pesticide Applicator Certification CEU Database located at http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Environmental-Services/Education/Pesticide-Certification-Website-Secure-Login. Any provider unable to comply with submitting their program in the required format must contact the FDACS CEU Coordinator to make other arrangements for submission of a program.
- 14. Correspondence regarding a program will only be communicated between the FDACS CEU Coordinator(s) and the approved Provider or Co-Provider. No changes to a program or information requests will be processed without an approved Provider or Co-Provider making the request.

# **PROGRAM AUDITING**

At a minimum, the Department auditor must determine if the seminar meets two basic goals:

- 1. The training session or seminar follows the agenda that provides the attendees quality education that will enhance their knowledge of pesticides and pest management related subjects that was previously submitted to the Department for credit approval and is of sufficient duration as approved by the Department.
- 2. The training session provides a method to account for an attendee's whereabouts during the program.

When an audit conducted by the Department identifies training that does not meet the standards for valid training, the Department may take one of the following actions, by issuing a notice to the provider, using the established administrative action process under Chapter 120, Florida Statutes:

- Revoking the credits or hours assigned to a training event or seminar.
- Reducing the credits or hours assigned to a training event or seminar.
- Suspending a seminar or training provider's ability to obtain validation.
- Suspending a specific speaker, session, or program from obtaining validation.
- Imposing additional corrections or requirements for future seminar or training event validation.
- Imposing mandatory evaluation at future seminars or training events.

As with all corrective or punitive actions, the intent is to ensure future compliance with established standards and to deter the occurrence of non-compliance.

# **CEU OBJECTIVES**

Continuing education includes educational classes, workshops, seminars, teaching tours, conferences, etc., that teach pest control licensees, certificate holders and other pesticide applicators information on pest management and pesticide use.

The purpose of continuing education is to ensure that certificate holders and pesticide applicators keep their knowledge current in the areas of pest control laws and regulations; proper, safe and efficient pesticide use; protect the public health, environment and property; and encourage safe working conditions for agricultural and pest control workers.

Continuing education re-certification training helps ensure competency and is in lieu of re-examination.

Florida regulations require certified persons to obtain both CORE hours and SPECIALITY CATEGORY hours to renew their credential(s).

Re-certification continuing education programs should contribute and build on improving the competence in pest control and the use and handling of pesticides by an applicator.

As a minimum, re-certification requirements should verify that:

- (1) An applicator possesses a practical knowledge of the pest problems and pest control practices associated with his/her pesticide operations;
- (2) They are familiar with proper storage, use, handling and disposal of the pesticides and containers; and
- (3) His/her related legal responsibility.

The Continuing Education Programs should continue to build on this knowledge and these abilities and present current information.

Please note: It is the structure of the agenda, disclosure of the speaking topics, and requested category(ies) for the program that allows for the person evaluating your program to properly evaluate and award the correct categories. The next section provides an example of an acceptable agenda.

Nothing prohibits a provider from utilizing "guest speakers" to present pertinent information to attendees for periods of time less than 50 minutes, and these smaller presentations can be grouped together, if they are of a similar nature and offered sequentially (NOT at the same times), to determine the program length.

However, these agendas must demonstrate that these topics are related to a single category; guest speaker subject expertise information will need to be submitted; and a mechanism must be demonstrated to verify a person's attendance at ALL topics to earn credit for the category.

For example, most regulatory and label discussions will be awarded CORE category credits. However the use of a specific pesticide product or methodology for lawn & ornamental applications with specific use directions in that area, could qualify for the specific specialty category. It is the detail in your agenda that determines whether the category(ies) you have requested get approved.

To demonstrate this concept, if your program discloses practical knowledge of pesticide problems associated with the maintenance of ornamental trees, shrubs, plantings, and turf, including recognition of potential phytotoxicity to a wide variety of plant material, drift, and persistence beyond the intended period of pest control to an attendee, it would probably be awarded the Ornamental & Turf, Lawn & Ornamental, Limited Lawn & Ornamental and/or Limited Commercial Landscape Maintenance categories. (Care must be taken to differentiate the Agricultural uses from the Structural uses so as to not mislead a Limited category holder into thinking he or she could make applications that exceed the provisions of their limited category.)

If your program discloses or demonstrates a practical knowledge of a wide variety of household or indoor pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid contamination of food, damage and contamination of habitat, exposure of people and pets which could include the discussion of practical knowledge of the specific factors which may lead to a hazardous conditions, including continuous exposure in the various situations encountered in this category such as babies, children, pregnant women, and elderly people. These types of topics would probably be awarded the Private Applicator, General Household and Rodent, and Limited Structural categories. (Care must be taken to differentiate the Agricultural uses from the Structural uses.)

Set forth in subsequent sections are some guidelines to assist providers in developing quality programs. Besides the traditional topics such as laws and regulations, safety, pest identification, calibration of equipment, labeling requirements, other acceptable topics could be surface water, ground water and air quality protection issues.

# Topics that generally do NOT qualify for re-certification credit.

Sometimes such topics are easily recognized and at other times, not so. Generally speaking, excluded topics include business operations (e.g., budgeting, personnel or promotion), marketing, non-pesticide use safety training such as ladder safety or safe vehicle operations, the advertisement or promotion of specific goods or services and vendor displays or showrooms. Programs that focus on teaching how to take and pass the certification exam, versus teaching the material, do not qualify for continuing education credits.

Topics that are outdated or do not promote proficiency and enhance an applicator's abilities, skills and knowledge, within either a general or a specialty category, in a manner that encourages the proper use and handling of pesticides and compliance with pesticide laws and regulations, are normally excluded from re-certification training.

# **AGENDA EXAMPLE**

If you follow this format your CEU request should proceed through the review process with minimal delay.

**Provider Name:** 

Class location: Facility name/Building/Room Class address: Address, City, State, Zip, County

Class Date: Class Time Start:

Class Time End/Complete:

Categories & quantity/amount CEU hours requested: (per example below: Core – 2 hrs; L&O – 2 hrs)

<u>Time</u>	<u>Hours</u>	Topic/Training Method					
7:45-8:00		I.	Introduction: Review Agenda, Distribute Handouts				
8:00-9:00	1.00 (core)	II.	Pesticide Laws and Regulations (core)				
		Lecture Review	"Pesticide Laws and Regulations" e/Discussion/Handouts: Review of FIFRA of New York Pesticide Laws of Law in other states that accept this course.				
9:00-10:00	1.00 (core)	III.	Pesticide Labeling				
		Lecture/Handouts/Powerpoint: Using specimen labels from a metambased product, and a diquat-based product. We will review the general format, terminology, precautionary statements, symbols, signal words etc which are found on the pesticide label. We will also discuss generally stricted use, and use consistent with labels.					
10:00-10:15	Break						
10:15-11:15	1.00 (L&O)	IV.	Pesticide Types and Formulations used in Lawn & Ornamentals				
		and for and did formul residue	e/Discussion/Handouts: Paying particular attention to the types rmulations of the active ingredients found in metam/dichlobenil quat type products, we will review the various types and ations of pesticides, compatibility, synergism, persistence, es, tolerances, and proper mixing sequence for tank mixes. Will ver application materials and sites allowed by limited ations				

11:15-12:15 1.00 (L&O) V. Pest Management System Alternatives for use in Lawn & Ornamentals

Video: "Integrated Pest Management"

First a discussion of IPM, what it means in agriculture, and how it applies to our specialty. We will also discuss public relations, public perceptions of pesticide use, and the importance of maintaining a positive public image.

Discussion of non-chemical weed control methods, including mechanical methods, physical controls, and cultural controls (selection of plant/tree planting sites, selection of plant/tree species).

Also a discussion of those situations where chemical weed control is not the best choice of methods, because of environmental considerations or efficacy issues.

12:15-12:30 VI. Attendance Certificates Distributed and Class Dismissal.

\_\_\_\_\_

As demonstrated, this agenda provides us everything we need to evaluate the course content, instruction time, and award appropriate continuing education credits.

# **ADA - REASONABLE ACCOMMODATION POLICY**

The Department of Agriculture and Consumer Services is committed to the fair and equal employment of people with disabilities. Reasonable accommodation is the key to this non-discrimination policy. While many individuals with disabilities can work without accommodation, other qualified applicants and employees face barriers to employment without the accommodation process. It is the policy of this Department to reasonably accommodate qualified individuals with disabilities unless the accommodation would impose an undue hardship.

This policy also applies in the Certification and Training Section. Accommodations will be provided to qualified individuals with disabilities when such accommodations are directly related to the facilities where the examination is offered and/or to the extent that the accommodation will not provide an unfair advantage.

The Department can make reasonable accommodations to the exam administration process in certain circumstances. A reasonable accommodation is one that would not "fundamentally alter" the licensing program. For example, since all federal and state registered pesticide labels are in English, so the ability to read and comprehend the pesticide label in English is a necessary job element. Giving someone more time to read an exam, or providing the exam in a larger font would not fundamentally alter the certification program. However, providing an accommodation to someone unable to read or not fluent in English (e.g., having someone read the exam and answers for the applicant) would fundamentally alter the licensing program and not be allowed.

The ADA only requires a state to open the certification process to people that could meet the essential eligibility requirements if given reasonable accommodations (qualified individuals with disabilities). Essential eligibility requirements are the knowledge, skills, and abilities that certified applicators must have. For example, an applicator must be able to read the pesticide label, operate application equipment, and explain the job to someone working under his or her supervision. If a person cannot perform these tasks, regardless of disability, he or she is not qualified to be a certified pesticide applicator.

#### **Definition**

Disability: For purposes of determining eligibility for a reasonable accommodation, a person with a disability is one who has a physical or mental impairment that materially or substantially limits one or more major life activities.

#### Reasonable accommodation

A reasonable accommodation is a modification or adjustment to the exam environment that makes it possible for a qualified individual with a disability to enjoy an equal certification process.

Examples of accommodations may include acquiring or modifying equipment or devices; modifying training or exam materials; and making facilities readily accessible.

Procedure – Applicants seeking certification

1. The applicant shall inform the certification and training section of their need for an accommodation. The request must be received by the stated examination deadlines in Chapter

- 482, Florida Statutes, or at least 60 days prior to seeking examination for Chapter 487, Florida Statutes.
- 2. The Department may request documentation of the individual's functional limitations to support the request. Any medical documentation that is collected for this purpose, will be maintained on separate forms and retained only until it is reviewed and a determination made. The application will be noted that an accommodation was requested and if it was approved or denied. The supporting medical information supplied by the applicant will then be destroyed. No one outside of the certification and training section will be told or have access to medical information, unless the disability might require emergency treatment.
- 3. This process may require the Department to consult with the individual:
  - To discuss the exam process in detail.
  - Determine the precise certification limitation.
  - Identify the potential accommodations and assess the effectiveness each would have in allowing the individual to complete the certification and examination process.
  - Select and implement the accommodation that is the most appropriate for both the
    individual and the Department. While an individual's preference will be given consideration,
    the Department is free to choose among equally effective accommodations and may choose
    the one that is less expensive or easier to provide.
  - The ADA Coordinator designee will work with the employee to obtain technical assistance, as needed.
  - The Department will provide a decision to the applicant within a reasonable amount of time.

# **Appeal**

Applicants who are dissatisfied with the decision(s) pertaining to his/her accommodation request may file a written appeal with the Department, within a reasonable period of time, for a final decision.

# **ENTOMOLOGY PROGRAM, CHAPTER 482, FLORIDA STATUTES**

Chapter 482, Florida Statutes, and the associated rules, Chapter 5E-14, Florida Administrative Code, regulate the Structural Pest Control Industry and Private Applicator certification for any person who makes routine pesticide applications in private or public structures or any areas where a person could be exposed to the pesticide application. This excludes agricultural areas and mosquito control applications regulated under Chapter 487 and Chapter 388, Florida Statutes.

#### **RECIPROCITY FOR CHAPTER 482 LICENSES AND CERTIFICATES**

Chapter 482, Florida Statutes does NOT provide for reciprocity with ANY other state. This means that ANY out-of-state applicants must meet our current exam qualification requirements and they must pass the specific certification exam(s).

#### **COMMON CEU OBJECTIVES BY CATEGORY**

Please be aware that there can be overlap between agenda topics and several closely related categories. For example, a Lawn & Ornamental program might also be applicable to Limited Gov't/Private Lawn and Ornamental category as well as Ornamental and Turf and Limited Commercial Landscape Maintenance. This is why we require agenda topics and a specific category request for CEUs so that the program can be evaluated against the specific category requirements.

#### **482 CORE**

The core category is a generalized area that can be applicable to ALL STRUCTURAL pesticide uses or applications; or is applicable to multiple specialties.

Traditional objectives for the Core category could be:

- -Discussion or review of Laws and Regulations pertaining to applicable State and Federal laws and regulations
- -Reading and understanding the label and labeling information—including the common name of pesticides he/she utilizes; pest(s) to be controlled, timing and methods of application; safety precautions; and any specific disposal procedures.
- -Pesticide Safety including toxicity, hazards to man, common exposure routes, common types and causes of pesticide accidents, need for and use of protective clothing and equipment, signs of pesticide poisoning and first aid and other procedures to follow in case of a pesticide accident.
- -Proper identification, storage, transport, handling, mixing and loading procedures and disposal methods.
- -General insect morphology including common features of pest organisms, characteristics of damage and pest development and biology
- -Environmental factors that can influence pesticide applications such as weather and climate, terrain, soil type and geological features, wetlands, soil drainage patterns and presence of fish, wildlife and other non-target organisms.
- -Integrated Pest Management methodology or techniques NOT specific to a particular type or category that may include knowledge of which formulation and application method to use in a given situation and knowledge to distinguish between proper and improper pesticide applications.

-Equipment used for application including advantages and limitations of each, and use, maintenance and calibration.

#### **GENERAL HOUSEHOLD AND RODENT**

Chapter 482.021, Florida Statutes, defines this category as:

(11) "General household pest control" means pest control with respect to any structure, not including fumigation or pest control with respect to termites and other wood-destroying organisms.

This category could include any pestiferous organisms (OTHER THAN wood-destroying organisms, and lawn pests) that are associated with a structure, such as – household (roaches/ants/flies) – storage (grain moths/weevils), biting (mosquito, flea, tick), and occasional pest invaders (spiders, centipedes, earwigs, scorpions, etc).

Traditional objectives for the General Household category could be:

- -Demonstrating knowledge allowing the applicator to determine and prepare the proper concentration of pesticide to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety in a structure.
- -Demonstrating practical knowledge of a wide variety of household or indoor pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid contamination of food, damage and contamination of habitat, exposure of people and pets.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including continuous exposure in the various situations encountered in this category such as babies, children, pregnant women, and elderly people.
- -Integrated Pest Management specifically addressing techniques and methodologies for pests in, on or under a structure (excepting wood-destroying organisms and lawn pests).

#### **LAWN AND ORNAMENTAL**

Chapter 482.021, Florida Statutes, defines this category as:

(17) "Lawn and ornamental pest control" means pest control with respect to pests of any lawn or ornamental.

This category could include any pestiferous organisms (OTHER THAN household and wood-destroying organisms) that are associated with the turf or ornamental plants and plant beds such as – chinch bugs, army worms, molecrickets, scale, nematode and wood borers as well as turf/plant selection, maintenance (including fertilization, cultural practices and weed control.

Traditional objectives for the Lawn and Ornamental category could be:

- -Demonstrating knowledge allowing the applicator to determine and prepare the proper concentration of pesticide to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety in a lawn or ornamental plant area.
- -Demonstrating practical knowledge of a wide variety of turf and ornamental weeds or pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid damage and contamination of habitat, and exposure of people and pets.

- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including drift and environmental conditions that could cause run-off or ground water contamination, failure to notify registrants on the pesticide notification registry or failure to post treatment notices.
- -Integrated Pest Management specifically addressing techniques and methodologies for weeds or pests in, on or under turf or an ornamental plant, including mulch areas (excepting wooddestroying organisms and household pests).

#### TERMITE AND OTHER WOOD-DESTROYING ORGANISMS

Chapter 482.021, Florida Statutes, defines this category as:

(28) "Termites and other wood-destroying organisms pest control" means pest control with respect to any termite or other wood-destroying organisms, including fungi, by the use of any chemical or mechanical methods, including moisture control for the prevention or control of fungus in existing structures, but not including fumigation, lawn or ornamental, or general household pest control.

The statute further defines a wood-destroying organism to be:

(30) "Wood-destroying organism" means arthropod or plant life which damages and can reinfest seasoned wood in a structure, namely termites, powder-post beetles, oldhouse borers, and wood-decaying fungi.

This category could include any pestiferous organisms (OTHER THAN household and lawn and ornamental organisms) that are associated with cellulose materials found in, on or under a structure (furnishings), cellulose materials used to construct a structure or cellulose materials used for plant beds or infestations within trees, such as – subterranean termites, dampwood termites, drywood termites, tree termites and wood boring beetles.

Traditional objectives for the Termite and Other Wood-destroying Organisms category could be:

- -Demonstrating knowledge allowing the applicator to determine and prepare the proper concentration of pesticide to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety within the treatment area.
- -Demonstrating practical knowledge of a wide variety of wood-destroying organisms pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid damage and contamination of habitat, and exposure of people and pets.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, failing to recognize construction elements resulting in improper treatment and structural contamination, and ground water contamination.
- -Integrated Pest Management specifically addressing techniques and methodologies for wooddestroying organisms, including mulch areas (excepting household and lawn and ornamental pests).

#### **FUMIGATION**

Chapter 482.021, Florida Statutes, defines this category as:

(10) "Fumigation" means the use, within an enclosed space or in or under a structure or tarpaulins, of a fumigant in concentrations that may be hazardous to human beings. This is the use of a gaseous fumigant in the true sense of the word – not a fogger or smoking device.

This is actually a specialty category based on the dangers, risks and hazards associated with structural fumigation which requires high level training and certification. This category could include any EXISTING pestiferous organism (OTHER THAN lawn and ornamental organisms), such as – drywood termites, Formosan termites, powder post beetles, death watch beetles, old house borers, bedbugs, cockroaches, clothes moths, rodents (rats, mice), and the larvae and adults of carpet beetles (except egg stage), oriental, American, and brown-banded cockroaches.

Traditional objectives for the Fumigation category could be:

- -Demonstrating knowledge of structural fumigation measuring structures, tarp placement, ground seal, shooting equipment placement, PPE- respiratory protection, aeration procedures, and clearance procedures.
- -Demonstrating knowledge allowing the applicator to determine and the proper amount of pesticide to be used base on label and organism identification; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety within the treatment area.
- -Demonstrating practical knowledge of a wide variety of household and wood-destroying organisms pests, including their life cycles, and methods of application that avoid damage and contamination of habitat, and exposure of people and pets.
- -A discussion of practical knowledge of the specific factors which make fumigation the proper control method of choice.

#### LIMITED CERTIFICATION FOR GOVERNMENTAL/PRIVATE APPLICATORS

Chapter 482.155, Florida Statutes, requires this category of government employees and private persons who apply pesticides to their employer's property or their own private property. This can include property types such as: public buildings, schools, hospitals, nursing homes, grocery stores, restaurants, apartments, and common areas of condominiums and any other private properties where the public may be exposed to pesticide applications.

Two sub-categories were created: Structural and Lawn and Ornamental.

Traditional objectives for the Limited Government/Private Structural category could be:

- -Demonstrating knowledge allowing the applicator to determine and prepare the proper concentration of pesticide to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety in a structure.
- -Demonstrating practical knowledge of a wide variety of household or indoor pests (including wood-destroying organisms), demonstrating their life cycles, types of formulations appropriate for their control, and methods of application that avoid contamination of food, damage and contamination of habitat, exposure of people and pets.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including continuous exposure in the various situations encountered in this category such as babies, children, pregnant women, and elderly people.
- -Integrated Pest Management specifically addressing techniques and methodologies for pests in, on or under a structure.

Traditional objectives for the Limited Government/Private Lawn and Ornamental category could be:

- -Demonstrating knowledge allowing the applicator to determine and prepare the proper concentration of pesticide to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety in a lawn or ornamental plant area.
- -Demonstrating practical knowledge of a wide variety of turf and ornamental weeds or pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid damage and contamination of habitat, and exposure of people and pets.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including drift and environmental conditions that could cause run-off or ground water contamination, failure to notify registrants on the pesticide notification registry or failure to post treatment notices.
- -Integrated Pest Management specifically addressing techniques and methodologies for weeds or pests in, on or under turf or an ornamental plant, including mulch areas (excepting wooddestroying organisms and household pests).

#### LIMITED CERTIFICATION FOR COMMERCIAL LANDSCAPE MAINTENANCE PERSONNEL

Chapter 482.156, Florida Statutes, provides this category for commercial landscape maintenance personnel to authorize them to apply herbicides for controlling weeds in plant beds and to perform integrated pest management on ornamental plants using insecticides and fungicides having the signal word "caution" but not having the word "warning" or "danger" on the label. The application equipment that may be used by a person certified pursuant to this section is limited to portable, handheld 3-gallon compressed air sprayers or backpack sprayers having no more than a 5-gallon capacity and does not include power equipment.

Traditional objectives for the Limited Commercial Landscape Maintenance Personnel category could be:

- -Demonstrating knowledge allowing the applicator to determine and prepare the proper concentration of pesticide to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and public health and safety in a lawn or ornamental plant area WITHIN THE LIMITATIONS OF THE CERTIFICATION NO TURF.
- -Demonstrating practical knowledge of a wide variety of ornamental weeds and pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid damage and contamination of habitat, and exposure of people and pets WITHIN THE LIMITATIONS OF THE CERTIFICATION NO TURF.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including drift and environmental conditions that could cause run-off or ground water contamination, failure to notify registrants on the pesticide notification registry or failure to post treatment notices WITHIN THE LIMITATIONS OF THE CERTIFICATION NO TURF.
- -Integrated Pest Management specifically addressing techniques and methodologies for weeds or pests in, on or under an ornamental plant, including mulch areas (excepting wood-destroying organisms and household pests) WITHIN THE LIMITATIONS OF THE CERTIFICATION NO TURF.

#### LIMITED CERTIFICATION FOR URBAN LANDSCAPE COMMERCIAL FERTILIZER APPLICATION

Chapter 482.1562, Florida Statutes, was created to provide a means of documenting and ensuring compliance with best-management practices for commercial fertilizer application to urban landscapes.

Effective January 1, 2014, any person who makes a commercial application of a fertilizer to an urban landscape must be certified under this section.

Traditional objectives for the Limited Urban Landscape Commercial Fertilizer Application category could be:

- -Demonstrating knowledge related to Florida-Friendly Landscaping Principles and cultural practices that protect Florida's water resources, including: nonpoint source pollution, laws, and effects on water quality; effects on business, economy, and quality of life; and best management practices as both good business and environmental benefit.
- -Demonstrating knowledge allowing the applicator to determine and prepare the proper amount of fertilizer to be used under particular circumstances; taking into account such factors as calculating the treatment area, type of application equipment and environmental or public health and safety in a lawn or ornamental plant area.
- -Topics related to Florida turf grass species and characteristics and Florida landscape plants and characteristics, including fertilizer requirements and the effects of landscape design, mowing, irrigation, shade, wear, pest, disease, cold and heat stresses, and conversely, the effects of fertilization on these cultural aspects in addition to direct effects on water quality, including nutrient pollution, erosion and sedimentation, and water usage rates. In addition, topics that related to the trimming and alterations of mangroves according to the 1996 Mangrove Trimming and Preservation Act.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including drift and environmental conditions that could cause run-off or ground water contamination, fertilizer characteristics and selection, including physical and chemical properties; soil type, pH, temperature, and moisture effects on release rates; calculation of application rates; spreader calibration; and handling materials and spills.

#### LIMITED CERTIFICATION FOR COMMERCIAL WILDLIFE MANAGEMENT PERSONNEL

Chapter 482.157, Florida Statutes, authorizes a person to engage in commercial trapping of wildlife to use nonchemical methods, including traps, mechanical or electronic devices, or exclusionary techniques to control commensal rodents.

Traditional objectives for the Commercial Wildlife Management categories could be:

- -Demonstrating practical knowledge of rodents, including their life cycles, methods of control (NON-CHEMICAL) appropriate for their control, and avoid contamination of food, damage and contamination of habitat, exposure of people and pets.
- -A discussion of practical knowledge of the specific factors which may lead to a hazardous condition, including continuous exposure in the various situations encountered in this category such as babies, children, pregnant women, and elderly people.
- -Integrated Pest Management specifically addressing techniques and methodologies for rodent exclusion in, on or under a structure.

#### **BEE ERADICATION OR REMOVAL – SPECIAL NOTE**

Although not a license or certification, the Bureau of Entomology and Pest Control, regulates ALL METHODS of pest control under Chapter 482, Florida Statutes (F.S.). Eradication of pests (including honeybees) meets the definition of pest control, Chapter 482.021, Florida Statutes.

Therefore, a person being hired to eradicate a bee nest or swarm (even if they don't "spray") must be a licensed pest control operator possessing either a General Household Pest (GHP) license which covers indoor and outdoor removal - or a Lawn & Ornamental license (L&O) which covers removal of colonies and swarms only if they are located outside a structure, like a tree.

A registered beekeeper (with the Department's Division of Plant Industry) can also remove the colony with non-lethal methods as per rule 5E-14.151, Florida Administrative Code (F.A.C.).

# PESTICIDES PROGRAM, CHAPTER 487, FLORIDA STATUTES

Chapter 487, Florida Statutes and the associated rules, Chapter 5E-9, Florida Administrative Code, regulates all restricted-use pesticide applicators for the Agricultural Industry and Commercial/Public/Private Specialty Certifications. This excludes structural pest control and mosquito control applications regulated under Chapter 482 and Chapter 388, Florida Statutes.

# **RECIPROCITY FOR CHAPTER 487 LICENSES AND CERTIFICATES**

Chapter 487, Florida Statutes, has entered into several "reciprocity" agreements with several neighboring states, specifically, Mississippi, Georgia, Alabama, North Carolina, South Carolina and Indiana. The reciprocal agreements waive ONLY the certification exam requirement, NOT the need for licensing or certification. Applicators are still required to obtain a Florida license for any application of restricted use pesticide in Florida. Reciprocity with states that do not have an existing agreement with Florida may be approved on a case by case basis, at the sole discretion of the Department. License terms and fees may be pro-rated.

Table 8. RECIPROCAL CERTIFICATIONS ALLOWED BY LICENSE TYPE & CATEGORY under Chapter 487, F.S. (As of 3/19/2010)							
LICENSE TYPE	CATEGORY	ALABAMA	GEORGIA	NORTH CAROLINA	SOUTH CAROLINA	MISSISSIPPI	INDIANA
	Aerial	yes	yes	no	no	yes	no
	Ag Animal	yes	yes	yes	yes	yes	no
	Ag Plant / Ag Row Crop	yes / Ag Plant	yes / Ag Plant	yes / Ag Plant	yes / Ag Plant	yes / Ag Row Crop	yes / Ag Plant
	Aquatic	yes	yes	yes	yes	yes	yes
Commercial	Demonstration & Research	yes	yes	yes	yes	yes	no
or	Forest	yes	yes	yes	yes	yes	yes
Public RUP* License (Chapter 487)	Organotin Antifouling Paint	no	yes	yes	yes	yes	no
	Ornamental & Turf	yes	yes	yes	yes	yes	no
	Regulatory Pest Control	yes	yes	yes	yes	yes	no
	Right-of-Way	yes	yes	yes	yes	yes	yes
	Seed Treatment	yes	yes	yes	yes	yes	yes
	Soil & Greenhouse	no	no	yes	no	no	no
	Wood Treatment	no	yes	yes	yes	yes	no
Private RUP* License (Chapter 487)	Private Applicator Agriculture	no	no	yes	no	no	no

<sup>\*</sup> RUP = restricted use pesticide

NOTE: Reciprocal Certification with other states and categories may be allowed for RUP licensing on a case-by-case

#### **COMMON CEU OBJECTIVES CHAPTER 487 BY CATEGORY**

Please be aware that there can be overlap between agenda topics and several closely related categories. For example, an Ornamental and Turf program might also be applicable to Ag Row Crops. This is why we require agenda topics and a specific category request for CEUs so that the program can be evaluated against the specific category requirements.

#### **487 CORE**

The core category is a generalized area that can be applicable to ALL AGRICULTURAL pesticide uses or applications; or is applicable to multiple specialties.

Traditional objectives for the core category could be:

- -Discussion or review of Laws and Regulations pertaining to applicable State and Federal laws and regulations
- -Reading and understanding the label and labeling information—including the common name of pesticides he/she utilizes; pest(s) to be controlled, timing and methods of application; safety precautions; and any specific disposal procedures.
- -Pesticide Safety including toxicity, hazards to man, common exposure routes, common types and causes of pesticide accidents, need for and use of protective clothing and equipment, signs of pesticide poisoning and first aid and other procedures to follow in case of a pesticide accident.
- -Proper identification, storage, transport, handling, mixing and loading procedures and disposal methods.
- -General insect morphology including common features of pest organisms, characteristics of damage and pest development and biology
- -Environmental factors that can influence pesticide applications such as weather and climate, terrain, soil type and geological features, wetlands, soil drainage patterns and presence of fish, wildlife and other non-target organisms.
- -Integrated Pest Management methodology or techniques NOT specific to a particular type or category that may include knowledge of which formulation and application method to use in a given situation and knowledge to distinguish between proper and improper pesticide applications.
- -Equipment used for application including advantages and limitations of each, and use, maintenance and calibration.

#### AGRICULTURAL ROW CROP PEST CONTROL

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in the production of agricultural crops other than tree crops, including but not limited to tobacco; peanuts; cotton; feed grains; soybeans and forage crops; vegetables; small fruits not produced on trees; grasslands; or non-crop agricultural lands; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Agricultural Row Crop category could be:

- -Demonstrating practical knowledge of agricultural row crops and associated pests, the chemical control measures that pertain to the prevention or control of such pests, the equipment or methodologies used to safely and effectively implement such measures, the potential for pesticide residues on such crops, preharvest application intervals, post-application reentry interval restrictions, phytotoxicity, pesticide-related soil or water problems, potential for pesticide-induced environmental contamination, and non-target injury and community problems that may result from the improper use of pesticides in agricultural row crop production.
- -Applicators in this category shall also demonstrate practical knowledge of the procedures and equipment used to apply pesticides with irrigation water through an irrigation system. This knowledge shall include equipment calibration; proper design, use, and maintenance of anti-siphon devices and check valves to prevent pesticide contamination of water supplies; proper interpretation of pesticide label or labeling requirements for products registered for chemigation; and appropriate use of personal protective equipment associated with this type of application.

#### AGRICULTURAL TREE CROP PEST CONTROL

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in the production of agricultural tree crops, including but not limited to citrus; pecans; or other fruits, nuts, or agricultural crops grown on trees; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Agricultural Tree Crop category could be:

- -Demonstrating practical knowledge of the agricultural tree crops and associated pests, the chemical control measures that pertain to the prevention or control of such pests, the equipment or methodologies required to safely and effectively implement such measures, the potential for pesticide residues on food crops, preharvest application intervals, post-application reentry interval restrictions, phytotoxicity, pesticide-related soil or water problems, potential for pesticide-induced environmental contamination, and non-target injury or community problems that may result from the improper use of pesticides in agricultural tree crop production.
- -Applicators in this category shall also demonstrate practical knowledge of the procedures and equipment used to apply pesticides with irrigation water through an irrigation system. This knowledge shall include equipment calibration; proper design, use, and maintenance of anti-siphon devices and check valves to prevent pesticide contamination of water supplies; proper interpretation of pesticide label or labeling requirements for products registered for chemigation; and appropriate use of personal protective equipment associated with this type of application.

#### AGRICULTURAL ANIMAL PEST CONTROL

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in the production of agricultural animals, including but not limited to beef or dairy cattle, swine, sheep, horses, goats, poultry, fish, or other agricultural livestock. Use in the production of agricultural animals means applications of pesticides on or to the animals themselves or in or on places where such animals are kept or confined or places such animals are likely to be kept or confined. Doctors of Veterinary Medicine engaged in the business of applying pesticides for hire, publicly holding themselves out as pesticide applicators, or engaged in large-scale use of pesticides, must be licensed in this category. This category is valid for licensure of commercial and public

applicators.

Traditional objectives for the Agricultural Animal category could be:

-Demonstrating practical knowledge of agricultural animal production and associated pests, the chemical control measures that pertain to the prevention or control of such pests, the equipment or methodologies required to safely and effectively implement such measures, the specific toxicity of such pesticides and associated residue potential, and the potential for animal injury associated with pesticide formulation, application techniques, animal age or stress, and extent of treatment.

# PRIVATE APPLICATOR AGRICULTURAL PEST CONTROL

This category includes individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in the production of agricultural plants, including but not limited to tobacco, peanuts, cotton, feed grains, soybeans, forage, vegetables, fruits, nuts, forests, ornamental trees, shrubs, flowers, or turf; or in the fumigation of soil, agricultural structures, or raw agricultural commodities; or in the production of agricultural animals, including but not limited to beef or dairy cattle, swine, sheep, horses, goats, poultry, fish, or other agricultural livestock, and including places on or in which animals are kept or confined or places where such animals are likely to be kept or confined; and on grasslands and non-crop agricultural lands. This category is valid solely for licensure of private applicators.

Traditional objectives for the Private Applicator Agricultural category could be:

- -Demonstrating practical knowledge of agricultural plant and animal production, associated pests, the chemical control measures that pertain to the prevention or control of such pests, the equipment or methodologies required to safely and effectively implement such measures, preharvest application intervals, post-application reentry interval restrictions, specific pesticide toxicity, and the potential for: pesticide residues in agricultural commodities; phytotoxicity; pesticide-related soil or water impacts; pesticide-induced environmental contamination; non-target injury; off-site problems that may result from the improper use of pesticides in agricultural production; and animal injury associated with pesticide formulation, application techniques, animal age or stress, or extent of treatment.
- -Applicators in this category shall also demonstrate practical knowledge of the procedures and equipment used to apply pesticides with irrigation water through an irrigation system. This knowledge shall include equipment calibration; proper design, use, and maintenance of anti-siphon devices and check valves to prevent pesticide contamination of water supplies; proper interpretation of pesticide label or labeling requirements for products registered for chemigation; and appropriate use of personal protective equipment associated with this type of application.
- -Applicators seeking licensure in this category shall also demonstrate practical knowledge of soil-inhabiting pests and pests of stored raw agricultural commodities, the fumigant pesticides that may be used to control such pests, and the equipment or methodologies required to safely implement fumigation measures to control such pests.
- -This knowledge shall include the basics of fumigant pesticide toxicology; application methodologies for applying soil and commodity fumigants; techniques and procedures for monitoring the concentration of a fumigant pesticide in soil, storage facilities, air or water; use and maintenance of personal protective equipment and clothing; and specific safety procedures for handling pressurized chemicals and for avoiding non-target exposure to a fumigant pesticide.

#### **SOIL AND GREENHOUSE FUMIGATION**

This category is applicable to individuals using or supervising the use of any restricted use fumigant pesticide injected or applied to field soils; to the soils of seed or transplant beds or containerized plants; to potting soil; to lawns, turf, and ornamentals not associated with structures; or within enclosed agricultural structures such as greenhouses where agricultural production is in progress. This category is valid for licensure of public and commercial applicators.

Traditional objectives for the Soil and Greenhouse Fumigation category could be:

- -Demonstrating practical knowledge of soil-inhabiting pests and pests of agricultural crops grown inside structures such as greenhouses, the fumigant pesticides that may be used to control such pests, and the equipment or methodologies required to safely implement fumigation measures to control such pests.
- -This knowledge shall include the basics of fumigant pesticide toxicology; application methodologies for applying soil and structural fumigants; techniques and procedures for monitoring the concentration of a fumigant pesticide in soil, air or water; use and maintenance of personal protective equipment and clothing; and specific safety procedures for handling pressurized chemicals and for avoiding non-target exposure to a fumigant pesticide.

#### **RAW AGRICULTURAL COMMODITY FUMIGATION**

This category is applicable to individuals using or supervising the use of any restricted use fumigant pesticide injected or otherwise applied to any post-harvest raw agricultural commodity within any storage facility, during processing or manufacturing procedures, or applied to or within a storage facility prior to the facility receiving a raw agricultural commodity for storage or after a raw agricultural commodity has been removed from such a facility. Storage facilities include but are not limited to corn cribs, grain elevators, tobacco barns, produce trailers, farm vehicles used to store agricultural commodities, processing plant bins or storage rooms for raw commodities, and any other enclosed structure used to contain a harvested raw agricultural commodity. This category is valid for licensure of public and commercial applicators.

Traditional objectives for the Raw Agricultural Commodity Fumigation category could be:

- -Demonstrate practical knowledge of pests of stored raw agricultural commodities, the fumigant pesticides that may be used to control such pests, and the equipment or methodologies required to safely implement fumigation measures to control such pests.
- -This knowledge shall include the basics of fumigant pesticide toxicology; application methodology for fumigating stored agricultural commodities; techniques and procedures for monitoring the concentration of a fumigant pesticide in a storage facility or in air or water; use and maintenance of personal protective equipment and clothing; and specific safety procedures for handling pressurized chemicals and for avoiding non-target exposure to a fumigant pesticide.

#### **FOREST PEST CONTROL**

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in forests, forest nurseries, and forest seed orchards; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of public and commercial applicators.

Traditional objectives for the Forest Pest Control category could be:

-Demonstrating practical knowledge of the types of forests, forest nurseries and seed orchards in Florida and associated pests, forest population dynamics, relative biotic agents and vulnerability to pesticides, the chemical control measures that pertain to the prevention or control of forest pests, and the equipment or methodologies required to safely and effectively implement such measures while avoiding adverse effects on wildlife, ground or surface water, and recreational areas visited by the general public.

#### **ORNAMENTAL AND TURF PEST CONTROL**

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in the production of ornamental trees, shrubs, flowers, or turf; or for the maintenance of any such ornamental plants or turf grasses growing in or on cemeteries, golf courses, parks, or athletic fields; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Ornamental and Turf Pest Control category could be:

- -Demonstrating practical knowledge and recognition of pesticide problems associated with the production and maintenance of ornamental plants and turfgrasses, the chemical control measures that pertain to the prevention or control of such pests and the equipment or methodologies required to safely and effectively implement such measures.
- -This knowledge shall encompass an understanding of potential non-target injury due to drift and implementation of application methods to minimize exposure to humans, pets, or other domestic animals.

# **SEED TREATMENT**

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides designated by the Department as requiring licensure, on seeds; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Seed Treatment category could be:

- -Demonstrating practical knowledge of the types of seeds that require chemical protection against pests, the chemical control measures that pertain to the control of such pests, and the equipment or methodologies required to safely and effectively implement such pest control measures.
- -This knowledge shall include understanding the significance of coloring treated seed; the effects of carriers and surface active agents which influence pesticide binding and may affect germination; the hazards associated with handling, sorting and mixing, packaging and labeling treated seed; misuse of treated seed, such as introduction of treated seed into food and feed channels; and proper disposal of unused treated seeds.

# **AQUATIC PEST CONTROL**

This category is applicable to individuals using or supervising the use of any restricted use pesticide, or other pesticide requiring licensure, used or applied to any standing or running water, including banks or shorelines, excluding infusion of chlorine gas as described in Category 7B and applicators engaged in public health related activities as defined in Chapter 388, Florida Statutes, and the rules thereunder. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Aquatic Pest Control category could be:

- -Demonstrating practical knowledge of pest organisms in aquatic environments, the chemical control measures that pertain to the control of such pests, and the equipment or methodologies required to safely and effectively implement such pest control measures.
- -This knowledge shall include understanding calculation of volume of water to be treated; application rates; pH; potential secondary effects; various water use situations and the potential of downstream effects; potential pesticide effects on non-target organisms; and the principles of limited area application.

# **ORGANOTIN ANTIFOULING PAINT PEST CONTROL**

This category is applicable to individuals using or supervising the use of organotin antifouling paints classified as restricted use pesticides, or other pesticides requiring licensure, to control or prevent the growth of aquatic or marine organisms on submerged portions of aquatic or marine objects, structures or vessels. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Organotin Antifouling Paint Pest Control category could be:

-Demonstrate practical knowledge of the principles and practices of using antifouling paints, including toxicity to humans and non-target organisms via common exposure routes; proper cleaning, disposal and containment techniques; climatic factors that may influence environmental hazards; common types and features of target and non-target aquatic/marine organisms; proper handling, mixing and application procedures; and, the laws and regulations governing pesticides and antifouling paints.

# **RIGHT OF WAY PEST CONTROL**

This category is applicable to individuals using or supervising the use of restricted use pesticides, or other pesticides requiring licensure, in the maintenance of right-of-way areas associated with public roads, electric power lines, pipelines, railroads, and other similar areas; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of commercial and public applicators.

Traditional objectives for the Right of Way Pest Control category could be:

- -Demonstrating practical knowledge of pests that occur in right-of-way areas accompanying roads, electric lines and substations, pipelines, railroads, and similar situations and measures for control.
- -This knowledge shall include types of herbicides used on right-of-way areas; chemical control measures that pertain to the prevention and control of right-of-way pests; equipment or methodologies required to safely and effectively implement such measures; pesticide runoff and drift prevention; recognition of target organisms; actions necessary to prevent excessive foliage destruction; and potential effects on non-target and off-site organisms.

#### **WOOD TREATMENT**

This category is applicable to individuals using or supervising the use of restricted use wood preservative pesticides, or other pesticides requiring licensure, in wood treatment facilities in the production of treated wood products; but not including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of commercial and public applicators.

Traditional objectives for Wood Treatment category could be:

-Demonstrating practical knowledge in using wood preservatives, air monitoring procedures, personal protective clothing and equipment, hygiene, related health and safety measures, emergency procedures, and practices necessary to prevent environmental contamination.

#### **CHLORINE GAS INFUSION**

This category is applicable to individuals using or supervising the use of chlorine gas to treat water in residential swimming pools by means of a portable system. Persons licensed in this category are authorized to use only those chlorine gas products specifically registered by the U.S. Environmental Protection Agency and the department with label directions for application to residential swimming pools. Individuals who conduct or supervise water treatment through the use of machinery permanently attached to all pools are exempt from this licensure requirement. This category is valid for licensure of commercial applicators.

Traditional objectives for Chlorine Gas Infusion category could be:

- -Demonstrating practical knowledge of the safe handling and application of liquefied chlorine gas for treatment of swimming pools, hot tubs and spas.
- -This will include a knowledge of the toxicology of liquefied chlorine gas, the dispersion properties and other characteristics of gaseous chemicals, equipment types, calibration procedures, application techniques, air and water monitoring procedures, use and maintenance of personal protective equipment and clothing, and factors that may lead to a hazardous condition, including handling of pressurized chemicals and direct or continuous exposure to chlorine gas.

#### **SEWER ROOT CONTROL**

This category is applicable to individuals using or supervising the use of restricted use pesticides to control or prevent the growth of roots in sewer lines or pipes. This category is valid for licensure of commercial and public applicators.

Traditional objectives for Sewer Root Control category could be:

-Demonstrating practical knowledge of the safe handling and proper application of sewer root control chemicals, including practical knowledge of root growth and biology; equipment types and calibration procedures; proper pesticide handling, mixing and application procedures; proper use and maintenance of personal protective equipment; toxicity of root control pesticides to humans and non-target organisms via common exposure routes; proper cleaning, disposal and containment techniques; effects of root control pesticides on ground water, sewage treatment plants, septic tanks, holding tanks, lift stations, and other sewage treating, conveying, or handling equipment; environmental effects; factors that may lead to a hazardous condition; and the laws and regulations governing pesticide use.

#### **REGULATORY PEST CONTROL**

This category is applicable to state, federal, and other government employees who use or supervise the use of restricted use pesticides, or other pesticides requiring licensure, in the control of regulated pests, including the use or supervision of restricted use fumigant pesticides. This category is valid for licensure of public applicators.

Traditional objectives for Regulatory Pest Control category could be:

- -Demonstrating practical knowledge of regulated pests, applicable laws relating to quarantine and other regulatory measures, environmental impact of pesticides used in suppression and eradication programs, and factors that may influence the introduction, spread, or population dynamics of regulated pests. Such knowledge shall extend beyond that relevant to Florida situations because of the necessity to assist periodically throughout the U.S. with regulated pests.
- -Applicators shall also demonstrate practical knowledge of soil-inhabiting pests and pests of agricultural crops grown inside structures such as greenhouses, the fumigant pesticides that may be used to control such pests, and the equipment or methodologies required to safely implement fumigation measures to control such pests.
- -This knowledge shall include the basics of fumigant pesticide toxicology; application methodologies for applying soil and space fumigants; techniques and procedures for monitoring the concentration of a fumigant pesticide in soil, air or water; use and maintenance of personal protective equipment and clothing; and specific safety procedures for handling pressurized chemicals and for avoiding non-target exposure to a fumigant pesticide.
- -Applicants seeking licensure in this category shall demonstrate practical knowledge of pests of stored raw agricultural commodities, the fumigant pesticides that may be used to control such pests, and the equipment or methodologies required to safely implement fumigation measures to control such pests. This knowledge shall include the basics of fumigant pesticide toxicology and application methodology for fumigating stored agricultural commodities.

# **AERIAL APPLICATION**

This category is applicable to individuals who apply any pesticide from an aircraft. This category is valid for licensure of public and commercial applicators for treatment sites that may legally (according to product label direction) be treated by aerial application under Chapter 487, F.S.

Traditional objectives for Aerial Application category could be:

-Demonstrating a practical knowledge of the principles and practices of aerial pest control and the safe application of pesticides by aerial delivery means.

#### **REGULATORY INSPECTION AND SAMPLING**

This category is applicable to government employees who collect regulatory samples of restricted use pesticides or conduct inspections involving the handling of opened containers of restricted use pesticides to determine compliance with applicable laws and regulations. Licensure in this category shall not be required of government inspection or sampling employees licensed in another public or commercial pesticide applicator category in accordance with this chapter, Chapter 388 or 482, F.S. This category is valid solely for licensure of public applicators. Licensure in this category does not authorize the application of restricted use pesticides.

Traditional objectives for Regulatory Inspection and Sampling category could be:

-There are no specific certification standards for this category. The general certification standards listed in the 487 Core area is all that is required for licensees in this category.

#### **NATURAL AREAS WEED MANAGEMENT**

This category is applicable to individuals who use or supervise the use of restricted use herbicides to control unwanted vegetation to protect natural communities of conservation and recreation lands and natural areas. This category is valid for licensure of commercial and public applicators. Applicators acting

under the authority of another license category prior to this category being established may continue activities under the alternate category until license renewal or expiration.

Traditional objectives for Natural Areas Weed Management category could be:

- -Demonstrate practical knowledge of pest plants that invade natural communities in Florida, the chemical control measures that pertain to such pests, and the equipment or methodologies required to safely implement such pest control measures.
- -This knowledge shall include special techniques and proper herbicide selection to effectively control target species and minimize adverse effects to the natural community. Knowledge of herbicide characteristics including toxicity to wildlife, behavior in plants, behavior in soil, persistence, and environmental fate, as well as methods for herbicide dilution and rate calculations will be demonstrated.

#### **DEMONSTRATION AND RESEARCH**

This category is a secondary category applicable to the following: 1) individuals who publicly demonstrate or supervise the demonstration of the proper use and application techniques of restricted use pesticides or other pesticides requiring licensure. Such individuals may include but are not limited to extension specialists, county agents, commercial industry representatives, and other individuals who demonstrate pesticide handling procedures used in public programs; and 2) individuals who conduct or supervise field research that utilizes restricted use pesticides or other pesticides requiring licensure. Licensure in this category authorizes pesticide demonstration and research only in accordance with other categories in which licensure is held. This category is valid for licensure of commercial and public applicators.

Traditional objectives for Demonstration and Research category could be:

-Demonstrating practical knowledge of pesticide compatibility, pH, and solubility; proper pesticide use and handling; equipment types and calibration conversions for small plots; principles of integrated pest management; pesticide resistance; safety procedures for pesticide transport, storage, and disposal; interpretation of Material Safety Data Sheets for pesticide products; environmental effects of pesticide use; laws and regulations governing pesticide use and experimental use; biotechnology as it relates to pest control; and liability associated with pesticide use.

# **ENTOMOLOGY PROGRAM, CHAPTER 388, FLORIDA STATUTES**

Chapter 388, Florida Statutes and the associated rules, Chapter 5E-13, Florida Administrative Code, regulates all Public Health Programs and Pesticide applicators for the Mosquito Control districts. This excludes structural pest control and agricultural applications regulated under Chapter 482 and Chapter 487, Florida Statutes.

#### RECIPROCITY FOR CHAPTER 388 LICENSES AND CERTIFICATES

Chapter 388, Florida Statutes, has entered into several "reciprocity" agreements with several neighboring states, specifically, Alabama and Georgia. The reciprocal agreements waive ONLY the certification exam requirement, NOT the licensing or need for the certification. Applicators are still required to obtain a Florida license for any application of restricted use pesticide in Florida.

Table 8. RECIPROCAL CERTIFICATIONS ALLOWED BY LICENSE TYPE & CATEGORY under Chapter 388 F.S. (As of 3/19/2010)							
LICENSE TYPE	CATEGORY	ALABAMA	GEORGIA	NORTH CAROLINA	SOUTH CAROLINA	MISSISSIPPI	INDIANA
Public Health Pest Control License (Chapter 388)	Public Health	yes	yes	no	no	no	no
Public Health Pest Control License/Aerial (Chapter 388)	Aerial	yes	yes	no	no	no	no

#### **COMMON CEU OBJECTIVES CHAPTER 388 BY CATEGORY**

Please be aware that there can be overlap between agenda topics and several closely related categories. For example, a Public Health Pest Control program might also be applicable to Limited Gov't/Private Structural Category and/or the General Household and Rodent category. This is why we require agenda topics and a specific category request for CEUs so that the program can be evaluated against the specific category requirements.

#### **PUBLIC HEALTH PEST CONTROL**

The public health pest control category is a specialty area that is applicable to ALL public health arthropod control. These applications are generally made within the air column of a localized area by municipal or county mosquito control programs for arthropods as defined, namely mosquitoes, midges, dog flies, house flies, yellow flies, sand flies.

Traditional objectives for the Public Health Pest Control category could be:

- -The law and rules of the state pertaining to mosquito control
- -Precautions necessary to safeguard life, health, and property in the conducting of mosquito control and application of pesticides
- -Mosquitoes, their habits, identification, and relative importance as nuisance pests and vectors of diseases

- -Currently accepted practices in the conducting of measures for the control of adult and larval forms of mosquitoes and surveillance techniques
- -How to read labels, a review of current state and federal laws on labeling, and a review of changes in or additions to labels on pesticides used in mosquito control.
- -PHPC Integrated Pest Management (IPM) programs and Best Management Programs (BMP) to reduce the use of pesticides for PHPC
  - to promote healthy, ecological using of pesticides to control arthropods
- -The Green Industries Best Management Practices for Protection of Water Resources in Florida.
- -A product-specific training that pertains to a specific pesticide brand name will be approved ONLY IF the pesticide brand name is verified to be registered in Florida for the current year. (verification will be made by using the FDACS Pesticide Registration Section's RTS website)
- -Other pest organisms that may be considered for the public health category are ticks, yellow jackets, Africanized bees, biting flies (No-see-um), eye gnats, urticating caterpillars, spiders, fleas

# **OUT OF STATE PROGRAMS**

Contact hours for continuing education offerings outside of Florida MAY BE be awarded, at the sole discretion of the Department, following the same requirements as an in-state program.

Out of state programs must be registered with the Department via the Department's Pesticide Applicator Certification CEU Database located at http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Environmental-Services/Education/Pesticide-Certification-Website-Secure-Login. Any provider unable to comply with submitting their program in the required format must contact the FDACS CEU Coordinator to make other arrangements for submission of a program.

These programs are required to meet the same CEU course objectives and are awarded the same number of hours as any other recertification program (1 credit hour for 50 minutes of instruction).

Approvals and/or Attendance credits will not be post-dated.

# **CLASSROOM TRAINING – COURSE DESIGN AND STRUCTURE**

The State of Florida accepts traditional classroom style recertification courses for pesticide applicator recertification credits. These courses are offered by state universities, trade associations, and private companies.

Classroom programs are approved for a ONE year period.

These programs are required to meet the same CEU course objectives and are awarded the same number of hours as any other recertification program (1 credit hour for 50 minutes of instruction).

To be approved, a full hard copy of the course will need to be provided with the application.

These programs will contain or must demonstrate the following design elements

- Course access and time stamping
- Applicator verification
- Course length and advancement
- Learning objectives
- Presentation style
- Exam or Quiz (optional)
- Transferring information to the Department

#### Course access and time stamping

Classroom programs are usually advertised and publicized well in advance, and most utilize a registration process. These advertisements should clearly state the date that Florida CEUs expire for the program.

These advertisements should also provide the dates, times, subject matter/content summary, as well as a contact person.

#### **Applicator Verification**

The ideal classroom course starts by conducting a "check in" process that identifies the attendee and handles any business functions such as registration and payment.

Once the program is called to order, an attendance review should be conducted to make sure everyone who registered is present for the program. Anyone completing this course under someone else's name or applicator number is committing fraud and can be penalized accordingly.

A brief review of the course contents and concise directions on how the class will be conducted and how attendance forms will be awarded could be presented.

Finally, the ideal course will contain or demonstrate some mechanism that does not allow the user to participate in more than one course at a time. For example, the user should not able to sign an attendance roster and take three different courses at once.

Related to concurrent courses is the extended absence from the program by an attendee. This should be noted and discussed with the attendee. If excessive (greater than 5 minutes of program length), the attendee should not be awarded any credits.

# **Course Length and Advancement**

Online courses for recertification must meet the same instruction criteria as other programs. The course must be at least 50 minutes in length for one recertification credit. The provider should have access to a timer or clock in order to pace his lecture/presentation. Providers are allowed up to a ten minute break for each 50 minutes of instruction.

## **Learning Objectives**

Learning objectives should be stated at the beginning of each course. These objectives can then be repeated at the end of the course as part of a course review. Using pre- and post-tests helps the course sponsor gauge whether the learning objectives were met. In order to analyze the pre- and post-test the course sponsor must be able to save each individual test. This feature enables the course sponsor to improve the course if the majority of the users are not able to comprehend a particular learning objective.

# **Presentation Style**

Courses should be varied in their presentation style and engage three common learning styles: visual, auditory, and kinesthetic. Visual learners prefer to learn by seeing and like visual stimuli such as pictures, slides, video clips, and graphs. Auditory learners learn well with lectures and tend to remember and repeat ideas that have been verbally presented. And finally, kinesthetic learners need to be involved in the learning process by physical participation (from the Institute for Learning Styles Research, learningstyles.org).

To incorporate these learning styles, courses should be clearly narrated, contain a mix of images, graphics and/or movies, and be interactive. Handouts may be distributed to attendees so that they can review course content.

#### **Exam or Quiz**

Classroom courses are not required to have an exam or quiz at the conclusion of the program, prior to awarding attendance certificates. As mentioned in the Learning Objectives section, pre and post tests helps the course instructor gauge how well the learning objectives were met.

Adding quizzes or games to the course requires the user to actively participate in the learning experience. The user should not be able to skip the activity and must complete it before advancing in the presentation or completion of the program. However, the course should not contain so many quiz questions that it becomes a distraction or difficult to convey the course content.

Exams or quizzes should have a minimum of 15 questions and, if used, an attendee must answer 70% of the questions correctly to receive credit for attending the course under Chapter 487, Florida Statutes, and 75% of the questions must be answered correctly to receive credit for attending the course under Chapter 482, Florida Statutes.

#### **Transferring information to the Department**

The mandated Department attendance form (DACS 13325) must be generated and provided to the attendee. The attendance form can only be provided after the course is completed and must contain all

of the required information such as the Program ID number; program title; date; time started; time finished; and the attendee's information, including their certificate number.

The Department is developing an electronic system that will allow providers to transfer the attendee's personal information, attendance information and awarded CEU credits directly to the Department for records keeping and renewal processing. This method will put the responsibility of credit transfer on the course provider. The transfer will be required to be done no later than two weeks after the completion of the class. The Department will not allow a monthly, quarterly, semi-annual or an annual transfer of all of the provider's attendees as this makes the attendance information unavailable to the applicator during the renewal period and hinders the applicator's ability to determine their need for any remaining CEU credits.

# ONLINE AND POLYCOM RECERTIFICATION TRAINING – COURSE DESIGN AND STRUCTURE

The State of Florida accepts online/polycom recertification courses for pesticide applicator recertification credits. A person would use a computer, smart phone or tablet to access the program over the internet via WiFi or cellular network systems. These courses are offered by state universities, trade associations, and private companies.

Online programs are approved for a ONE year period.

These programs are required to meet the same CEU course objectives and are awarded the same number of hours as any other recertification program (1 credit hour for 50 minutes of instruction).

To be approved, a full hard copy of the course will need to be provided and/or access (including username and password) via the web should be included with the application. The format that is provided will depend on the type of presentation. If a web page link is not provided, then interactive presentations (video, narrated, activities, etc.) will need to be submitted on a CD so the Department can review it from a student's perspective. A deatiled agenda of the program must also be submitted with the program request.

FOR POLYCOM COURSES – each Polycom location is considered a separate class and must have a designated provider/co-provider assigned to that location.

These programs will contain or must demonstrate the following design elements

- Course access and time stamping
- Applicator verification
- Course length and advancement
- Learning objectives
- Presentation style
- Exam or Quiz
- Transferring information to the Department

#### Course access and time stamping

The ideal course starts by providing very clear and concise directions on how to purchase and complete a course. One of the first screens the user should encounter is directions on how to purchase the course. For example, some online courses require the user to have an email and password before purchasing a course.

The courses should clearly state the date that Florida CEUs expire for the program.

The most familiar method for purchasing a course involves the use of a "shopping cart." The courses are displayed on the computer screen. The user selects a course and adds it to a virtual "shopping cart". After filling the cart, the user checks out and purchases the course(s) with a credit card. Because credit cards are being used, the website must be secure.

The user should receive a receipt of their purchase after completing the check out process and this receipt should reflect the date and time. This is important in case there are problems with the course and the user is not able to complete the purchased courses.

After purchasing the course, the user follows the directions and proceeds with the course(s). Some courses are free of charge. Access to free courses should also be quick and easy. There should be a mechanism to easily select the course such as the shopping cart method mentioned above. Any of these processes will have the ability to record date and time stamps that can be used to determine start or entrance times.

Not everyone who takes an online course is familiar or comfortable with computers or the Internet. Therefore, having technical assistance available is important. This may be an email or phone number for someone who can assist the user in the technical aspects of completing the course including course purchase, running the course and computer specifications.

Finally, the ideal course will contain or demonstrate some mechanism that does not allow the user to participate in more than one course at a time. For example, the user should not able to have three windows open and take three different courses at once. After all, a person could not attend three live programs at the same time.

Time stamping each course and verifying that the user has not completed more than one course in a 50 minute period is one way of doing this.

#### **Applicator Verification**

Applicator verification is a large obstacle to overcome for online courses, just as it is for in-person training. Unique to online courses is the difficulty in verifying the applicator as the person completing the course.

The program must demonstrate the ability to verify the person completing the course is actually the applicator and not an office assistant, spouse, or other person. One method is to have course sponsors contact a percentage of attendees sometime after the course is completed and ask them content-specific questions. If the attendee cannot answer the questions or provide any detailed information about the course, credits could be denied. Another method might be the collection of personal information known only to the attendee.

At the very least, the course should clearly state that anyone completing this course under someone else's name or applicator number is committing fraud and can be penalized accordingly. The user must read and agree to the terms of verification before proceeding with the course. If fraud is committed, the course sponsor has documentation of the user's acceptance of the course terms and be able to proceed with any penalties such as denying credits.

To eliminate the possibility of a single applicator completing the course but multiple applicators receiving credit, each SESSION should be unique, or a unique username and password is issued for each attendee, or a unique registration is generated for each session and these should be linked to the applicator license number. Because of the link to the applicator license number, credits for any completed course are assigned to only one license number. This helps eliminate applicators sharing attendance experience.

#### **Course Length and Advancement**

Online courses for recertification must meet the same instruction criteria as other programs. The course must be at least 50 minutes in length for one recertification credit. To meet this requirement, courses should be locked so that users can not advance through the course in less time or demonstrate the ability to track their progress through the course.

However, the user should be able to navigate backwards in the course in order to double check some information. Also, the user should not be limited to a 50-minute time limit because it may take longer for him/her to complete the course. The course should be developed to allow the user to pause or stop the course as needed.

# **Learning Objectives**

Learning objectives should be stated at the beginning of each course. These objectives can then be repeated at the end of the course as part of a course review. Using pre- and post-tests helps the course sponsor gauge whether the learning objectives were met. In order to analyze the pre- and post-test the course sponsor must be able to save each individual test. This feature enables the course sponsor to improve the course if the majority of the users are not able to comprehend a particular learning objective.

#### **Presentation Style**

Online courses should be varied in their presentation style and engage three common learning styles: visual, auditory, and kinesthetic. Visual learners prefer to learn by seeing and like visual stimuli such as pictures, slides, video clips, and graphs. Auditory learners learn well with lectures and tend to remember and repeat ideas that have been verbally presented. And finally, kinesthetic learners need to be involved in the learning process by physical participation (from the Institute for Learning Styles Research, learningstyles.org).

To incorporate these learning styles, courses should be clearly narrated, contain a mix of images, graphics and/or movies, and be interactive. It is important to have the course narrated by someone who speaks slowly, clearly and with some inflection. However, to be ADA-compliant (Americans with Disabilities Act) the course must also provide a script of the narration for those who are hearing impaired. Some users may desire to print the script of the course for reference or test taking.

# **Exam or Quiz**

On line courses are required to have an exam or quiz at the conclusion of the program, prior to awarding attendance certificates.

Adding quizzes or games to the course requires the user to actively participate in the learning experience. The user should not be able to skip the activity and must complete it before advancing in the presentation or completion of the program. However, the course should not contain so many quiz questions that it becomes a distraction or difficult to convey the course content.

Exams or quizzes should have a minimum of 15 questions and, if used, an attendee must answer 70% of the questions correctly to receive credit for attending the course under Chapter 487, Florida Statutes, and 75% of the questions must be answered correctly to receive credit for attending the course under Chapter 482, Florida Statutes.

If Exams or quizzes are immediately available for re-testing, they should include a 'shuffle' feature so that the order of the questions (or answers) varies each time the test is attempted. If an attendee fails the exam or quiz three times, they must repeat the entire training process.

# **Transferring information to the Department**

The mandated Department attendance form (DACS 13325) must be generated and provided to the attendee. The attendance form can only be provided after the course is completed and must contain all of the required information such as the Program ID number; program title; date; time started; time finished; and the attendee's information, including their certificate number.

The Department is developing an electronic system that will allow providers to transfer the attendee's personal information, attendance information and awarded CEU credits directly to the Department for records keeping and renewal processing. This method will put the responsibility of credit transfer on the course provider. The transfer will be required to be done no later than two weeks after the completion of the class. The Department will not allow a monthly, quarterly, semi-annual or an annual transfer of all of the provider's attendees as this makes the attendance information unavailable to the applicator during the renewal period and hinders the applicator's ability to determine their need for any remaining CEU credits.

# CORRESPONDENCE/MAGAZINE ARTICLE/CD/DVD RECERTIFICATION TRAINING – COURSE DESIGN AND STRUCTURE

The State of Florida accepts correspondence/magazine article (mostly reading with minimal to no student interaction) and CD/DVD recertification courses for pesticide applicator recertification credits. These courses are offered by state universities, trade associations, and private companies.

Correspondence/magazine article/cd/dvd programs are approved for a ONE year period.

Only CORE credit is available for magazine articles.

These programs are required to meet the same CEU course objectives but are only awarded a MAXIMUM of 1 credit hour for a two page article (at least 10,000 words by count).

Correspondence and magazine courses are evaluated for relevancy and accuracy of information. In general, when evaluating the length of the course, the Department uses 200 words per minute (wpm). This is based on the reading speed of the average person being 250 wpm.

To be approved, a full hard copy of the course will need to be provided with the application.

CD/DVD program course length will be evaluated by timing the use of the actual program disks provided to attendees and will have to be submitted to the Department in order to be approved.

These programs will contain or must demonstrate the following design elements

- Course access and time stamping
- Applicator verification
- Course length and advancement
- Learning objectives
- Presentation style
- Exam or Quiz
- Transferring information to the Department

#### **Course Access**

The ideal course starts by providing very clear and concise directions on how to purchase and complete a course.

The user should receive a receipt of their purchase and this receipt should reflect the date and time. This is important in case there are problems with the course and the user is not able to complete the purchased courses. The courses should clearly state the date that Florida CEUs expire for the program.

#### **Applicator verification**

Applicator verification is a large obstacle to overcome for correspondence courses, just as it is for inperson training. Unique to correspondence courses is the difficulty in verifying the applicator as the person completing the course.

The program must demonstrate the ability to verify the person completing the course is actually the applicator and not an office assistant, spouse, or other person. One method is to have course sponsors

contact a percentage of attendees sometime after the course is completed and ask them content-specific questions. If the attendee cannot answer the questions or provide any detailed information about the course, credits could be denied. Another method might be the collection of personal information known only to the attendee.

At the very least, the course should clearly state that anyone completing this course under someone else's name or applicator number is committing fraud and can be penalized accordingly. The user must read and agree to the terms of verification before proceeding with the course. If fraud is committed, the course sponsor has documentation of the user's acceptance of the course terms and be able to proceed with any penalties such as denying credits.

To eliminate the possibility of a single applicator completing the course but multiple applicators receiving credit, each SESSION should be unique. With written articles, accepting only original exam submission forms included with the article (not accepting copies) or generated through computer programming in the case of cd/dvd programs will help. At least everyone had to obtain their own copy of the article/magazine/cd/dvd.

These return mailers should require the attendee to complete the date and time they started and the date and time they completed the program (electronic cd/dvd programs should be able to demonstrate or capture system date/time for the time spent with the program).

If it is truly a correspondence course, then the materials can be linked to the attendee's license number before they are sent out to them, and credits for any completed course are assigned to only one license number. This helps eliminate applicators sharing attendance experience.

#### **Exam or Quiz**

Correspondence/magazine/cd/dvd courses are required to have an exam or quiz at the conclusion of the program, prior to awarding attendance certificates.

Adding exams, quizzes or games to the course requires the user to actively participate in the learning experience. The user should not be able to skip the activity. However, the course should not contain so many game questions that it becomes difficult to convey the course content.

Exams or quizzes should have a minimum of 15 questions and, if used, an attendee must answer 70% of the questions correctly to receive credit for attending the course under Chapter 487, Florida Statutes, and 75% of the questions must be answered correctly to receive credit for attending the course under Chapter 482, Florida Statutes. If an attendee fails, they must repeat the entire training process.

# **Transferring information to the Department**

The mandated Department attendance form (DACS 13325) must be generated and provided to the attendee. The attendance form can only be provided after the course is completed and must contain all of the required information such as the Program ID number; program title; date; time started; time finished; and the attendee's information, including their certificate number.

The Department is developing an electronic system that will allow providers to transfer the attendee's personal information, attendance information and awarded CEU credits directly to the Department for records keeping and renewal processing. This method will put the responsibility of credit transfer on the course provider. The transfer will be required to be done no later than two weeks after the completion

of the class. The Department will not allow a monthly, quarterly, semi-annual or an annual transfer of all of the provider's attendees as this makes the attendance information unavailable to the applicator during the renewal period and hinders the applicator's ability to determine their need for any remaining CEU credits.