

# BCE and ACE: Trusted credentialing for the individual



## The Entomological Society of America Certification Programs



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# Today's 3 goals

1. Introduce credentialing terms
2. Introduction of the Entomological Society of America (ESA)
3. Overview of ESA's certification programs



**en-to-mol-o-gy** [en-tuh-**mol**-uh-jee]

***noun***

the branch of zoology dealing with insects.



# ESA in Annapolis, MD (USA)

- Entomological Society of America
  - Founded 1889
  - Members in over 70 countries
  - Most research in pest control comes from our members in our journals or our meetings
- Entomological Foundation
- Entomological Society of America Certification Corporation





# ESA sets the science for pest management

**Certified  
Science**

Journal highlights for ACE & BCEs



**EntomologyToday**

THE LATEST NEWS ABOUT ENTOMOLOGY, BROUGHT TO YOU BY THE ENTOMOLOGICAL SOCIETY OF AMERICA



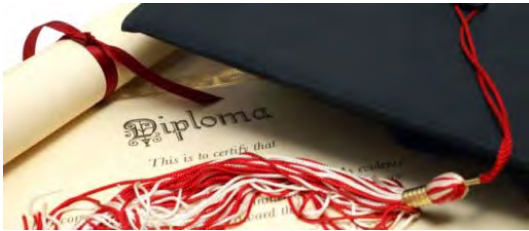
# Credentialing

- 4 forms of professional credentialing
  - Certificate
  - Certification
  - Licensure
  - Accreditation
- 3 types of credential-issuing organizations
  - Individual
  - Business/Institution
  - Governmental



# 4 Types of Credentialing

*3 voluntary, 1 mandatory*



Certificate



Certification



Accreditation



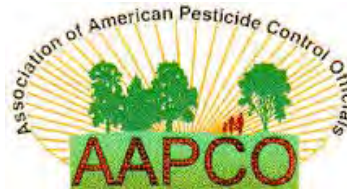
License



# Lots of pest control credentialing options



ThermaPureHeat®



# IPM: Pest Management has come a long way since the 1950s

*A process involving common sense and sound solutions for treating and controlling pests. These solutions incorporate three basic steps: inspection, identification and treatment. Treatment options vary from sealing cracks and removing food and water sources to pesticide treatments when necessary.*

Spraying on Jones Beach, Long Island, 1953



# ESA Certification Programs

- Board Certified Entomologist-BCE (1970's)
- Associate Certified Entomologist-ACE (2004)
- ACE-International (2014)



# American Registry of Professional Entomologists (ARPE)

1968 Founding Motion ...*That the Society approves in principle the establishment of a Registry to be maintained as a function of the Committee on Professional Training, Standards, and status for the purpose of:*

- A. Providing certification of professional status for qualified applicants.*
- B. Strengthening entomology in its relative position among professional groups.*
- C. Improving our rapport with the public thus enhancing the acceptance of entomology.*



# ARPE becomes BCE

- ARPE was folded into ESA in the late 1970s
- Formalized processes/enhanced academic rigor
- 18 Specialties → 6 Specialties

- Agricultural Entomology
- Apiculture
- Behavior
- Biological Control
- Ecology and/or Population Dynamics
- Forest Entomology
- General Entomology
- Medical and/or Veterinary Entomology
- Pest Management

- Pesticide Development and Analysis
- Physiology and/or Biochemistry
- Regulatory Entomology
- Survey
- Systematics and/or Morphology
- Toxicology
- Urban and Industrial Entomology
- Host Plant resistance
- Acarology

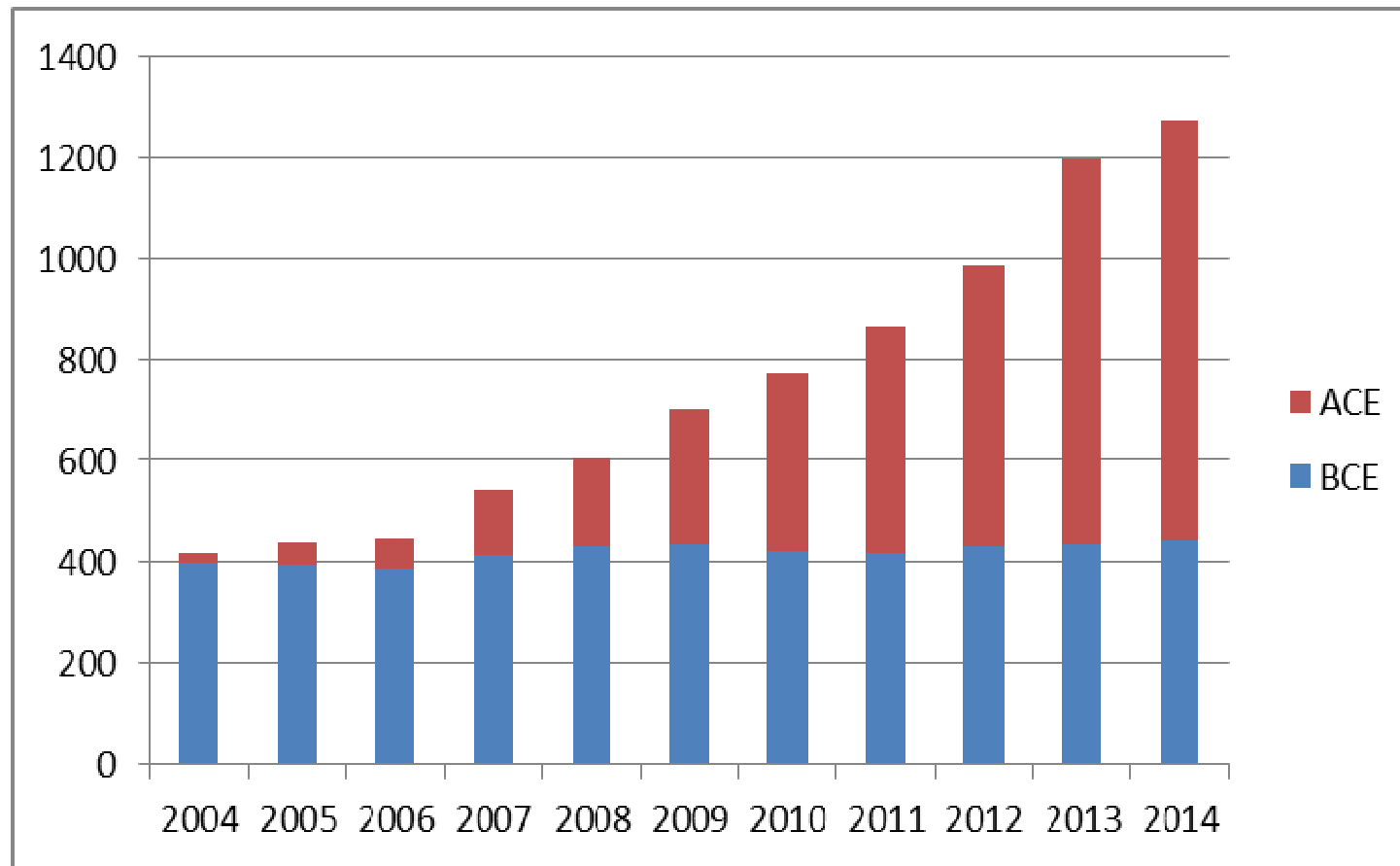


# ACE History

- In late 1990s conversations began about creating an Associate program
- Perceived need for a rigorous credential for those working with insects but without the formal academic training of an entomologist
- Program founders:  
Mike Merchant, BCE  
Bob Davis, BCE



# Rapid Growth of ACE



# What is ACE?

- Associate Certified Entomologist
- Personal certification, not business accreditation
- The most-respected sign of professional achievement in the global pest management industry
- NOT
  - A class or a course
  - A degree equivalency
  - Same thing as ESA membership
- Rapidly becoming the benchmark for pest management
- IPM-based
- Endorsed by NPMA



# A New Industry Standard



*“By encouraging participation in the (ACE) program, NPMA hopes to continue to help raise the level of professionalism and entomological expertise within the pest management industry ...”*

– Bob Rosenberg  
NPMA C.E.O.



# Differences between ACE, ACE-I & BCE

	ACE	ACE-I	BCE
Applicator's license required	✓		
Years of experience	5	5	3
Entomology degree required			✓
Reference letters needed	2	2	2
Exam required	1	2	2
Score to pass	75%	75%	70%
CEUs to renew (3yr period)	18	18	120
Membership in ESA required			
Prestigious credential	✓	✓	✓
Is an entomologist			✓



# Differences between BCE and ACE



**en-to-mol-o-gy** [en-tuh-**mol**-uh-jee]

**noun**

the branch of zoology dealing with insects.

ACE <> Entomologist

ACE <> BCE

ACE <> Degree equivalency

ACE = Proven method to showcase professionalism

ACE is a professional credentialing program designed for those whose approach to pest control **education** has focused more on the **applied** and less on that which would be found in a university setting.



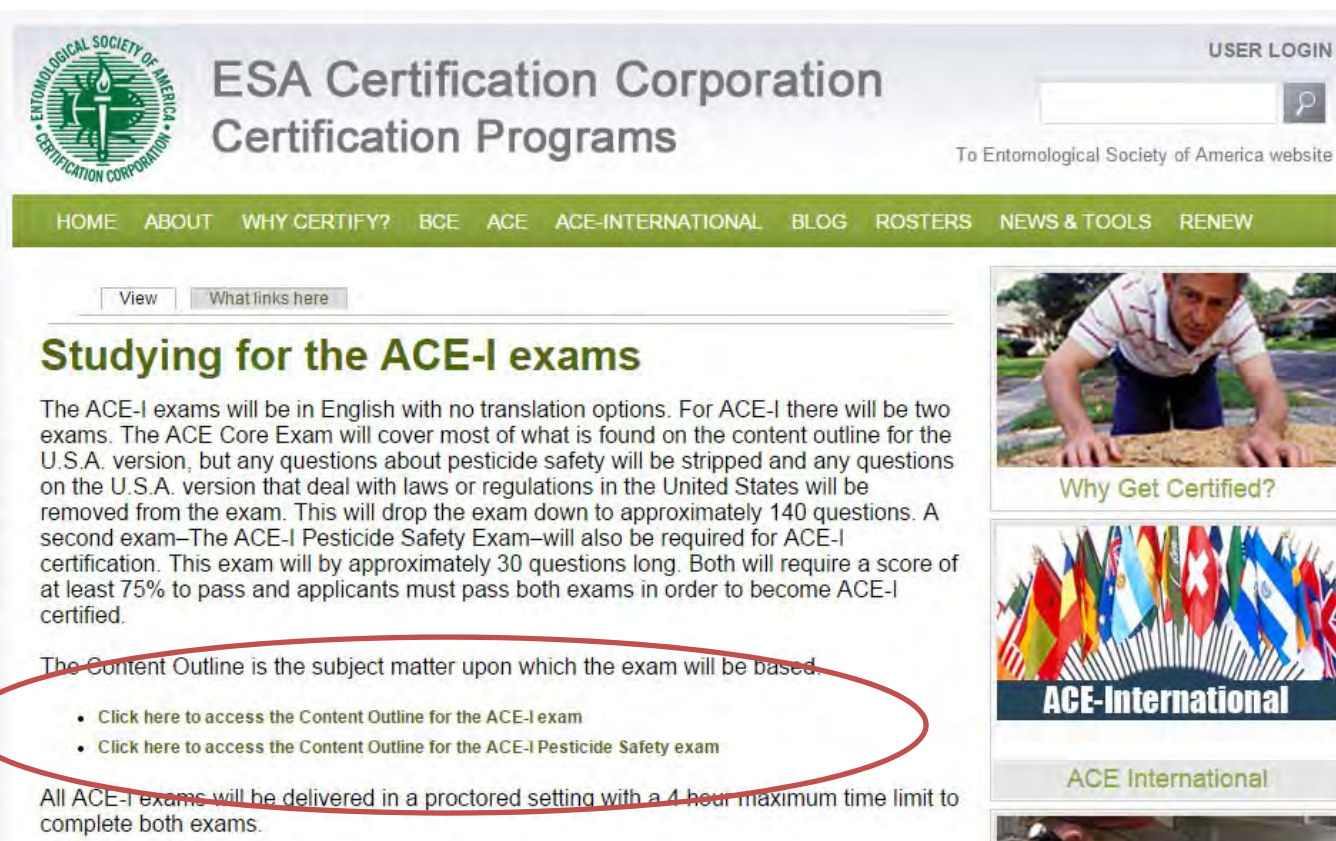
# 2014 ACE Exam Re-launched Along IPM Principles

- ACE Rewrite Committee exploded 2004 exam and content outline in 2012
- Old exam dissected and then recreated based on the daily work of a PMP
- Validated with PMP community
- New exam very closely follows IPM principles and practices



# ACE Content Outlines are Free Online

[www.entocert.org/ACE\\_Study](http://www.entocert.org/ACE_Study)



The screenshot shows the website for the Entomological Society of America Certification Corporation. The header includes the logo, the text "ESA Certification Corporation Certification Programs", a "USER LOGIN" section with a search icon, and a link "To Entomological Society of America website". A green navigation bar contains links: HOME, ABOUT, WHY CERTIFY?, BCE, ACE, ACE-INTERNATIONAL, BLOG, ROSTERS, NEWS & TOOLS, and RENEW. Below the navigation bar, there are buttons for "View" and "What links here". The main content area features the heading "Studying for the ACE-I exams" followed by a paragraph explaining the exam structure. A red circle highlights a section containing two links: "Click here to access the Content Outline for the ACE-I exam" and "Click here to access the Content Outline for the ACE-I Pesticide Safety exam". Below this, a paragraph states that all ACE-I exams will be delivered in a proctored setting with a 4-hour maximum time limit. To the right of the main text, there are three promotional images: "Why Get Certified?", "ACE-International" (featuring various national flags), and "ACE International".

ENTOMOLOGICAL SOCIETY OF AMERICA  
CERTIFICATION CORPORATION

ESA Certification Corporation  
Certification Programs

USER LOGIN

To Entomological Society of America website

HOME ABOUT WHY CERTIFY? BCE ACE ACE-INTERNATIONAL BLOG ROSTERS NEWS & TOOLS RENEW

View What links here

## Studying for the ACE-I exams

The ACE-I exams will be in English with no translation options. For ACE-I there will be two exams. The ACE Core Exam will cover most of what is found on the content outline for the U.S.A. version, but any questions about pesticide safety will be stripped and any questions on the U.S.A. version that deal with laws or regulations in the United States will be removed from the exam. This will drop the exam down to approximately 140 questions. A second exam–The ACE-I Pesticide Safety Exam–will also be required for ACE-I certification. This exam will be approximately 30 questions long. Both will require a score of at least 75% to pass and applicants must pass both exams in order to become ACE-I certified.

The Content Outline is the subject matter upon which the exam will be based.

- Click here to access the Content Outline for the ACE-I exam
- Click here to access the Content Outline for the ACE-I Pesticide Safety exam

All ACE-I exams will be delivered in a proctored setting with a 4 hour maximum time limit to complete both exams.

Why Get Certified?

ACE-International

ACE International

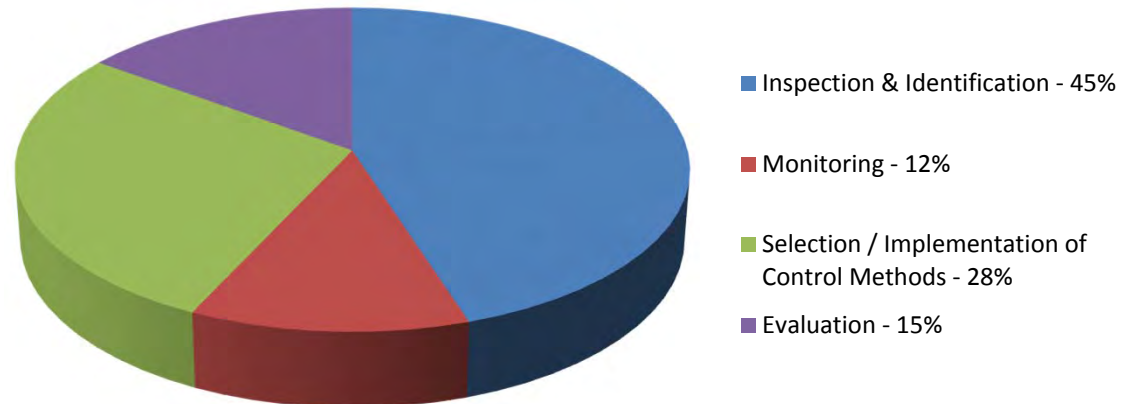


# What is on the ACE Core Exam?

## 4 key subject areas (Domains)

- Selection & Implementation of Control Methods
- Inspection and Identification
- Monitoring
- Evaluation

Knowledge Domains for ACE Exam



# Selection & Implementation of Control Methods (45% of the ACE Core Exam)

## 6 Skills within *this* Domain

- Choose the appropriate control method(s) for pest management
- Select the appropriate tool(s) for use with the pest management method(s) for pest scenarios
- Follow the label instructions and precautions
- Educate the customer on their role in pest management
- Perform selected pest control method(s)
- Document and communicate the pest control method(s) applied and tool(s) used for application



# Within Each Skill:

## Knowledge Needed to Accomplish the Skill

Domain 3, Skill 4: (Selection and Implementation of Control Methods: Educate the customer on their role in pest management)

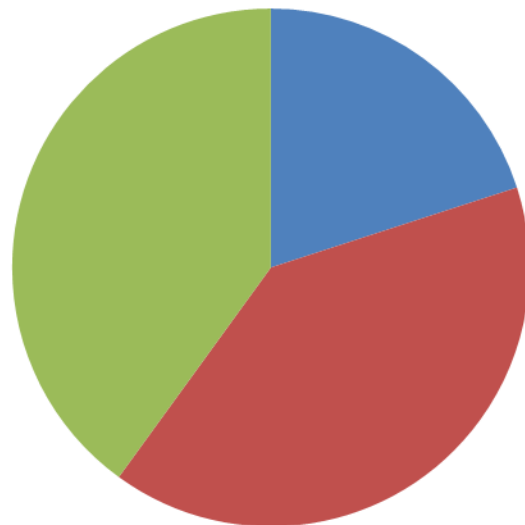
- Critical messages to convey
- Appropriate methods for message conveyance
- Behavioral customer modifications



# ACE-I Also Requires a Pesticide Exam

## 3 key subject areas (Domains)

- Understanding pesticides and control methods
- Using pesticides and other control methods
- Pesticide safety and exposure



- Understanding pesticides and control methods
- Using pesticides and other control methods
- Pesticide safety and exposure



# BCE Exams Being Re-written Now

- Developing Content Outlines for all exams
- Currently Reviewing/Updating
  - BCE Core Exam
  - BCE Medical/Veterinary Specialty Exam
- Soon to Review/Update
  - Urban/Industrial Specialty Exam
  - General Entomology Specialty Exam
  - Plant-related Entomology Specialty Exam



# Preparation...

- Difficult exams
  - Average ACE score is 71% (passing is 75%)
  - Majority do not pass on their first attempt
- Diligent self-study is the #1 way to prepare for the exam
- Certification Board recommends 40 hours *minimum* of self study prior to any exam attempt
- TESTING A BODY OF KNOWLEDGE, THIS IS NOT SOMETHING YOU CRAM FOR



# Cost to become an ACE or ACE-I

Type	ESA Member	Non-Member
Application (3yr)	\$355	\$395
Retesting	\$50	\$75
Renewal (3yr)	\$295	\$375

- Application is valid for three-years from approval
- Must pass ACE exam within three years
- Applicant is ACE-certified as soon as they pass exam
- New ACE does not need to renew until end of the three-year period
- Can test as many times as needed/able within the three-years
- If re-testing, must wait 3 months but not more than 12 months
- Renewal fee is for three years. CEU report must accompany renewal



# Cost to become a BCE

Type	ESA Member	Non-Member
Application	180	225
Addt'l. Specialty	50	75
Retesting	50	75
Renewal (1yr)	100	200
Intern Application	20	40

- Application does not expire, but must test within a year
- Must retest between 3 and 12 months from a failed attempt
- Must pass Core Exam and at least one Specialty Exam
- Renewal is annual
- CEU report must be submitted every three years
- If degree is obtained but do not have required work experience yet, must apply as a BCE-Intern



# ACE and BCE certification can lead to ...

- Better visibility
- More opportunities
- Jobs!

**APPLY TODAY!**



# Summary

ACE and BCE are voluntary programs that

- Establish a level of **professionalism** above and beyond that which is required by governments
- Emphasize **differentiation** from competition
- Build consumer **confidence**
- **Raise the bar** for all in the industry



# ESA Certification Contact Information

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