



# PROGRAM DESCRIPTION

Council-certified  
Indoor Environmental Consultant

# CIEC

The American Council for Accredited Certification offers the Council-certified Indoor Environmental Consultant (CIEC) to individuals with expertise in the fundamental principles of indoor environmental quality. Additionally, ACAC offers the CIEC examination to certain license applicants in states where it is required by law.

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### Objectives of the CIEC Program:

1. To raise the standards of those engaged in indoor air quality investigation, sampling, monitoring and consulting.
  2. To identify persons with acceptable knowledge of indoor air quality and the standards and regulations affecting Council-certified Indoor Environmental Consultants.
  3. To award special recognition to those indoor environmental consultants who have demonstrated verifiable field experience.
  4. To qualify applicants for certain state licenses.
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### Eligibility:

Applicants for the CIEC certification must demonstrate academic- and experience-related eligibility.

Applicants must possess one of the following combinations of eight (8) years education and relevant field experience:

- A 4-year post-secondary degree or its equivalent (30 credit hours) in engineering, science, architecture, industrial hygiene or related field of science with a minimum of four (4) years of documented field experience conducting indoor air quality investigations.
- A 2-year post-secondary degree or its equivalent (15 credit hours) in engineering, science, architecture, industrial hygiene or related field of science with a minimum of six (6) years of documented field experience conducting indoor air quality investigations.
- No degree, with at least eight (8) years of documented field experience conducting indoor air quality investigations. (High school diploma or GED required.)

Applicants must demonstrate experience in several areas of IAQ. Experience should include investigations, consulting and project management and/or report writing, and must come from at least three of the following five areas:

- Lead/Asbestos
- Microbial
- IH/Chemicals/Toxicology
- Building Sciences
- IAQ/HVAC

ACAC certification candidates document education by submitting transcripts with the application form. Candidates document field experience by submitting four project sheets (included in the application packet).

Applicants for state licenses where the CIEC examination is required must meet the eligibility requirements published by each state.

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### **The Required Body of Knowledge:**

The effective practice of indoor air quality investigation requires knowledge of a variety of subjects, from current standards and building codes to HVAC system design and maintenance. For certification purposes, the candidate for the CIEC designation must demonstrate familiarity with the basic reference materials of the industry, such as those summarized in the following list.

1. Bradley Prezant, et.al., *Recognition, Evaluation & Control of Indoor Mold* (Fairfax: AIHA, 2008)
2. EPA, *Building Air Quality: A Guide for Building Owners and Facility Managers* (Washington: EPA, 1991)
3. Shirley J. Hansen and H. E. Burroughs, *Managing Indoor Air Quality*, 4<sup>th</sup> or 5<sup>th</sup> ed. (Lilburn, GA: The Fairmont Press, Inc., 2008, 2011).
4. *NIOSH Respirator Selection Logic* (2004)

The Council-certified Indoor Environmental Consultant (CIEC) examination addresses the following domains of knowledge:

#### **IAQ Contaminants and Health Effects**

- Apply scientific knowledge of indoor environmental contaminants and general knowledge of their potential health effects to the investigation of indoor environmental quality.

#### **The Built Environment**

- Apply general knowledge of the design, construction and furnishing of the built environment to the investigation of indoor environmental quality.
- Understand common construction techniques and related technical drawings used in single family homes, multi-family residential buildings, commercial buildings and institutional facilities.
- Understand the sources, pathways and driving forces of condensation and humidity in indoor environments.
- Understand building materials and interior furniture and fixtures, their potential for off-gassing and their ability to affect indoor environmental quality.

#### **HVAC**

- Apply knowledge of heating, ventilation, and air conditioning (HVAC) principles, components and standards to the investigation of indoor environmental quality problems.
- Understand the HVAC system's role in maintaining pressurization, ventilation and temperature of indoor environments, and its effects on indoor environmental quality.
- Understand diagnostic procedures used to evaluate HVAC systems including air test and balance, air filtration and static capability.

#### **Equipment**

- Apply knowledge of the basic principles of operation and limitations of instruments used to obtain objective indoor environmental quality measurements, and analyze and interpret correctly the data gathered during an environmental investigation.

#### **Guidelines, Regulations & Standards**

- Apply knowledge of occupational standards related to the maintenance and improvement of indoor environmental quality.

#### **Remediation**

- Develop, manage, document and verify the correction of an indoor environmental quality problem.
- Apply current standards and guidelines of care relevant to improving indoor environmental quality, including containment, worker protection and project verification.
- Prepare all documents related to the successful completion of a project, including report of findings, project specification, documentation of practices and procedures, and verification plan.
- Conduct visual assessments and employ appropriate testing procedures to qualify and quantify indoor environmental quality conditions both before and after work.

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### **The ACAC Certification Process**

1. ACAC certification should not be confused with state licensing. State license candidates should read the following section, "The State Licensing Process."
2. ACAC certification candidates complete and forward the notarized application form, employer affidavits, project sheets and a copy of diploma or transcripts.
3. ACAC certification candidates pass the closed-book examination. If the examination is not successfully passed, a re-examination fee is required before retaking the examination.
4. ACAC certification candidates have up to 90 days from the date of application to complete the application process. Applications left incomplete after 90 days will be considered null and void.
5. ACAC certification candidates wait for the awarding of the certification. The Certification Board meets approximately every four (4) weeks to review the examination results and supporting materials before voting to award the certification.

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### **The State Licensing Process**

1. State licensing should not be confused with ACAC certification. ACAC certification candidates should read the previous section, "The ACAC Certification Process."
2. State license applicants complete and forward the notarized application form to the ACAC office.
3. ACAC does not require state license applicants to provide documentation of education or field experience in order to sit for the CIEC examination. State licensing agencies may require such documentation as part of the license application process.
4. State license applicants pass the closed book examination. ACAC reports exam scores directly to the appropriate state licensing agencies.
5. State license applicants follow individual state guidelines for completion of the license application.

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**The CIEC Examination:**

1. The applicant must complete a 3-hour, closed-book, written examination. The examination questions are based on the listed core skills and required body of knowledge. For an updated list of exam topics and item references to use in test preparation, visit [www.acac.org](http://www.acac.org).
2. The examination is closed-book! It is strongly recommended that candidates read the reference materials listed above before taking the examination.
3. There are 120 questions on the examination. Each question is multiple-choice with at least four (4) possible answers. Exam items are drawn from the required body of knowledge according to the following blueprint:

<b>CIEC Examination Blueprint</b>					
Domain/Cognitive Category	Knowledge	Comprehension	Application	Total # Items	Percentage
1. IAQ Contaminants and Health Effects	9	8	3	20	17
2. Principles of the Built Environment	9	8	3	20	17
3. HVAC	9	8	3	20	17
4. Equipment Selection, Calibration and Operation	10	9	3	22	18
5. Guidelines, Regulations and Standards	8	8	3	18	15
6. Remediation	9	8	3	20	16
<b>Total # Items</b>	<b>54</b>	<b>49</b>	<b>17</b>	<b>120</b>	
<b>Percentage</b>	<b>45</b>	<b>41</b>	<b>14</b>		<b>100</b>

4. **Passing Score:** The passing score for the CIEC examination is set by the CIEC certification board using the Modified Angoff Method. A score of 75% must be achieved to pass this examination.
  5. The examination is delivered electronically at an authorized testing center operated by Kryterion, Inc. There are no paper exams. Once a complete application packet is on file in the Council office, the candidate may register for the examination by calling the office at (888) 808-8381.
  6. Candidates should arrive 30 minutes before the testing appointment.
  7. Candidates must present two forms of government-issued identification at the testing center, one of which must be picture ID.
  8. Candidates must follow proctor instructions with regard to conduct, behavior, and the use of personal belongings and test materials, including submitting eyeglasses for inspection and turning out exterior pockets.
  9. Candidates failing to abide by these rules will not be permitted to sit for the exam, and a re-examination fee will be required.
  10. All examinations contain the same questions; however, the examination questions are presented to each candidate in random order and the examination answers are presented to the candidate in random order.
  11. Examinations are graded electronically at the testing facility, and scores are available to candidates immediately. An email is sent to the candidate's email address confirming test results. In the case of state license applicants, exam scores are also reported directly to the appropriate state licensing agency.
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**Fees:**

All fees are listed on the ACAC website. Corporate purchase orders, checks, Visa, MasterCard and American Express are accepted.

**Certification Fee for a two-year ACAC certification:**

- Certification fees include a non-refundable processing fee.

**Examination Fee:**

- Examination and certification fees are required prior to taking examinations.

**Re-certification Fee:**

- Re-certification is for a two-year period and requires documentation of continuing education. Re-certification fees include a non-refundable processing fee.

**Re-examination Fees:**

- For those who failed a previous exam.

**Penalties for late Re-certification:**

- May be waived in case of documented active military duty or medical issues.
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**The Certifying Body:**

1. The American Council for Accredited Certification is the certifying body for this certification program.
2. All decisions regarding application materials, examinations and the awarding of certifications are made by the CIEC Certification Board, which functions as part of the ACAC.

3. The certifying body's responsibility to applicants is to provide a credible certification. Operation of the certification program is closely monitored to ensure that reference materials remain current with the industry guidelines and standards and the eligibility requirements for certification are at appropriate levels. Examination questions are developed by certified CIECs who are currently active in the field of indoor environmental consulting. Pass/fail scores are set by the CIEC Certification Board at the ACAC annual meeting using the modified Angoff method. The Board authorizes an biannual statistical review of examination item performance and test reliability and updates the examination to reflect the latest changes in our rapidly evolving field.
  4. Certification Board members are required to abstain from voting on any applicant's completed file that may present a conflict of interest, either personally or professionally.
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### **Re-certification and Reinstatement**

ACAC certifications are current for two years from the date of issue. The certificate holder must accumulate forty (40) Re-certification Credits (RCs) prior to the certificate's expiration date. Each RC represents one (1) hour of continuing education or professional development. The certificate holder may accumulate the required hours at any time during the two-year certification period. An updated list of typical recertification activities is available on the Council website at [www.acac.org](http://www.acac.org).

Council-certified Indoor Environmental Consultants who do not acquire sufficient CIEC Re-certification Credits by their recertification date will be notified in writing to cease using the CIEC designation. They will be listed as expired on the Council website and will no longer be listed as a CIEC in any ACAC publication until such time as they resubmit to the certification process and successfully meet the current criteria for certification. Appropriate fees will apply.

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### **Due Process Procedures:**

1. The CIEC Certification Board is responsible for all facets of the certification program, including the review and evaluation of applications, the development and administration of examinations, the granting and reissuing of certificates and the adjudication of complaints against certificants.
  2. Suspensions: If a Council-certified Indoor Environmental Consultant does not accumulate the required re-certification credits, certification shall terminate unless, in the judgment of the Certification Board, extenuating circumstances exist and the deficiency can be readily overcome. Examples of extenuating circumstances include documentation of active military service or documentation of a serious medical condition.
  3. Complaints: If a Council-certified Indoor Environmental Consultant fails to abide by the ACAC Code of Conduct or is formally accused of gross negligence in the performance of his or her professional duties, the Certification Board may vote to refuse re-certification.
  4. Appeals: Any holder of a valid Council certification or applicant for such a certification may appeal the decisions of the Certification Board.
  5. Complaints or appeals shall be made in writing via certified mail to the Certification Administrator.
  6. In the case of complaints, the Certification Administrator shall forward the complaint to the accused certificant and allow him or her ample time to respond.
  7. The Certification Administrator, at the direction of the Executive Committee, may forward complaints or appeals to the appropriate Certification Board.
  8. The Certification Board shall rule on all complaints or appeals by unanimous vote.
  9. Complaints or appeals may be continued in writing via certified mail to the National Advisory Board.
  10. The National Advisory Board shall be the final court of appeal and will rule on complaints or appeals by unanimous vote.
  11. In resolving complaints or appeals, ACAC may rule only on its own decisions to grant or deny certification and recertification.
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## **Emeritus (Retired) Status**

1. Retired Council-certified Indoor Environmental Consultants may be granted emeritus status in their designation as long as they are retired from professional practice as a CIEC. Such persons will be granted the title "Emeritus".
2. Re-certification Fees for Emeritus (Retired) Status: **\$100 USD** for each two-year certification.
3. Continuing education is not required.
4. To return to active status, emeritus certificants must notify the Council in writing and pay a fee for a two-year active certification. At the end of the two-year period, all normal re-certification policies will apply.

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## **Use of the CIEC Designation:**

1. A Council-certified Indoor Environmental Consultant (CIEC) may use the designation with his/her name on organization letterheads, business cards and all forms of address. When using the CIEC designation, we encourage the spelling out of the designation fully in smaller print immediately below the signature block, as in the following example:

**John Doe, CIEC**

Council-certified Indoor Environmental Consultant  
Board-awarded by the American Council for Accredited Certification

2. Certification is for individuals only. The CIEC designation may not be used to imply that an organization or firm is certified.
3. The CIEC designation may NOT be used by individuals who pass the CIEC examination in order to obtain a state license, unless those individuals also complete the ACAC certification process as described in this booklet.

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## **ACAC Code of Conduct:**

- **Objective**

The objective of this code is to provide guidance for appropriate conduct for the certificants of the American Council for Accredited Certification as they engage in their individual professions.

- **Rules of Conduct**

Certificants of the American Council for Accredited Certification shall:

- Practice their respective professions following accepted industry standards and guidelines.
- Exercise caution not to misrepresent their credentials, training or experience in the course of their professional activities.
- Deal responsibly in advising parties regarding potential damage to property and/or risk to health.
- Maintain confidentiality concerning both personal and business information gathered in the performance of their professions, except in the case of overriding legal and/or health concerns.
- Avoid instances where conflict of interest or compromise of professional judgment may occur.
- Act with integrity to uphold the standards of their profession and of the Council and avoid any conduct that could adversely reflect on the Council and its certificants.

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We reserve the right to change/update our certification examination material, eligibility requirements and re-certification requirements at anytime we deem necessary to maintain the professional integrity and validity of our certification.

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