

## NRSB CE Course Review Criteria

### Objective and Primary Criteria

The objective of Continuing Education (CE) courses is to expand and reinforce the technical skills of radon professionals. To meet this objective the following criteria are to be met:

- Should be relevant to conducting radon measurement or installing radon mitigation systems
- Courses that cover non-radon subjects should provide skills and/or training that relate to radon measurement or mitigation, directly or indirectly
  - *Acceptable Example:* A course that teaches one how to interpret architectural drawings that would in turn be useful in designing radon reduction systems or developing a building measurement survey
  - *Non-Acceptable Example:* A course that teaches social marketing skills for advertising one’s business or accounting procedures for operating a business that doesn’t refer to radon
- A course should expand upon or refresh the content conveyed in an entry-level course. The content of any course should fall into one or more of the following subject areas:

MEASUREMENT	MITIGATION
Problem Evaluation	Problem Evaluation
Performance of Tests	Problem Diagnosis
Analysis of Measurements	Selection of Mitigation Strategy
Interpretation of Results	Implementation of Mitigation Strategy
Report of Findings	Evaluation of Mitigation Systems
Professional Standards of Conduct & Ethics	Professional Standards of Conduct & Ethics

- Courses can be relevant and approved for both measurement and mitigation CE credits
  - Although measurement and mitigation are different disciplines, they are very interrelated
  - Knowledge of proper mitigation approaches is helpful for measurement professionals when queried as to how to fix an identified concern or when conducting post-mitigation testing
  - Knowledge of proper measurement techniques is helpful for mitigation professionals when evaluating a building for mitigation approaches or even if the quality of the testing warrants mitigation without further measurements

## **Periodic Reviews and Course Updates**

CE courses that have previously been approved are to be re-submitted for review every 5 years extending from the date of their previous approval. The NRSB administrative office has authority to extend this period as it deems fit

In the event that significant technology changes occur or significant revisions are made to NRSB recognized standards, NRSB will notify training providers of the specific updates or revisions that are to be made in curriculum regardless, of where a course may be in its 5 year renewal cycle.

- Acceptable methods for Updates:
  - Complete revision of course and content
  - Supplemental modules that provide requisite updates with validation of material prior to issuance of course certificates (e.g. supplemental quizzes).
- Update material to be submitted to NRSB for expeditious review and approval.

## **Course Format/Delivery Method**

There are two basic delivery methods for CE courses; Live Classroom or On-Demand/Distance based programs. Common to both are the following (each item explained in more detail further in this document):

- Qualified Primary Instructor/Course Developer
- Relevant Content
- Course Agenda with Sub-Topics and Time Allotments equal to or greater than requested CE Hours
- Knowledge Assessment via quizzes, which must be passed prior to issuance of Course Completion Certificate with feedback to students explaining incorrect answers
- A means for students to pose technical questions to course provider/instructor
- Course Evaluation
- Sample Course Completion Certificate

### *Qualified Primary Instructor/Course Developer*

- Live Classroom
  - The individual(s) delivering the course must be familiar and experienced in the field upon which the content is based.

- Resume or Curricula vitae to be provided with course application
- Substitutions of instructors is allowed if directly overseen by previously submitted instructors or supplemental Instructor Approval applications provided in advance of course delivery.
- Distance Based
  - In the case of a recorded presentation the course developer is to be familiar with and experienced in the field upon which the content is based.
  - Resume or Curricula vitae of developer and/or instructor to be provided with course application
  - In the case where written materials are to be read by students as part of the course, the materials should be written by a qualified instructor or a recognized authority/agency.
    - Acceptable Examples:
      - Standards as Recognized by NRSB
      - Peer-reviewed research papers (Health Physics, etc.)
    - Non-Acceptable Examples:
      - Trade journals
      - Editorial columns

#### *Relevant Content*

- Course to meet Primary Criteria Cited above
- Course reviewer to review submitted materials
  - Includes review of all graphics or slides used in presentation (Live or Distance Based)
- Course reviewer to make a reasonable effort to identify technical errors
  - Course provider bears ultimate responsibility for content and NRSB approval does not indicate approval of content or ancillary comments that may be made during a live presentation
  - Grammar may be noted, but it is not the responsibility of reviewer to correct grammar unless it impacts the accuracy of a statement.

#### *Course Content*

- Live Classroom or Live Streaming to a Dedicated Audience.
  - Submission of classroom presentation materials
  - Visuals/Slides to be utilized
    - Time allotment estimate 2.5 minutes/slide

- Reference Materials
  - Copy of hand-outs, or
  - Links to online reference materials
- Agenda and time estimate to total number for credit hours requested

### How to Calculate CE Credits

Item	Allotted Time
Introduction and Class Mechanics	15 minutes
Delivery	2.5 minutes/slide
In Class Demonstrations	As required
Field Trips	Time at sight. (travel time is excluded)
Breaks	15 minutes for every four hours of instruction
Quiz taking	1 minutes/question
Post Quiz Review and Discussion	2 minute/question
Course Evaluation, certificate and closure Mechanics	10 minutes
Scientific Papers/Studies to be read	90 seconds/page

*In the case of Live Streaming the course provider must describe the mechanism by which it is assuring attendance of students during the instructional periods.*

- Distance Based
  - A course that is approved for live class delivery is also approved for distance-based delivery if recorded and edited for On-Demand delivery, provided it meets the requirements below. In this case it would be assigned the same course ID and can be offered in either format going forward.
  - The time allotment requirements are reduced in some areas due to the reduction in idle time when a recorded program is edited

Item	Allotted Time
Introduction and Course Mechanics	10 minutes
Delivery	2.5 minutes/slide if approval requested prior to recording OR Actual duration of recording
Pre-recorded B-Roll	Time of video
Quiz taking	1.5 minutes/question
Quiz Feedback*	1 minute/question
Course Evaluation, certificate and closure Mechanics	0 minutes
Scientific Papers/Studies to be read	90 seconds/page

\* Each quiz must have a feedback mechanism to explain the correct answer to the student for the questions he/she/they missed on an exam. Solution of mathematical formulae is to be presented and standards are to be referenced and cited where applicable.

### *Knowledge Assessment*

A means to assess the knowledge/skills gained by the student in the course is a core requirement of any course to be approved. Typically, this is accomplished via quizzes that can be in any one of the following formats:

- Multiple Choice (4 possible answers)
- True/False
- Numerical Result of a Calculation

Regardless of the delivery mechanism, the minimum number of quiz questions required is 5 questions per credit hour requested.

There is no prohibition against a student retaking a quiz repeatedly nor is there a time limit for completing a quiz.

Regardless of the delivery mechanism, a feedback mechanism to explain the correct answer to the student for the questions he/she/they missed on an exam. Solution of mathematical formulae is to be presented and standards are to be referenced and cited where applicable. Acceptable approaches are as follows:

- Live Classroom Delivery or Webcast Alternatives
  1. A quiz that is completed at the conclusion of the course, then is passed to other students for grading while the instructor discusses each question and its answer providing an explanation as to why an answer is correct. This activity would be part of the delivery time allotment as it is instructional. OR
  2. Students log into an Internet based Learning Management System (LMS) after the class is concluded to complete the quiz. Said quiz must have the ability to grade the quiz as well as provide feedback as to why an answer is correct or how a calculation is performed. In this case the student would be able to repeat the quiz until a passing grade is obtained (70%). Also, the student would not be eligible to obtain a course completion certificate until a passing grade is obtained and a course evaluation submitted.
- Distance-Based Approach
  1. As part of the distance-based course module and within a Learning Management System the student would complete a quiz or multiple quizzes. Said LMS must

have the ability to grade the quiz as well as provide feedback as to why an answer is correct or how a calculation is performed. In this case the student would be able to repeat the quiz until a passing grade is obtained (70%). Also, the student would not be eligible to obtain a course completion certificate until a passing grade is obtained and a course evaluation submitted.