

Entry Requirements

The Institute of Acoustics is committed to an open access policy. The main principle is to admit all who will benefit from the Certificate programme. However students will need to be numerate and to be able to carry out scientific calculations. If the Certificate is used towards satisfying the educational requirements for Technician membership of the IOA (**TechIOA**) relevant passes at GCSE level may be necessary also.

Study Modes

Students take the Certificate at an Accredited Centre (see separate list). For those with relevant prior qualifications, the course may be taken as a one day refresher course including examination. Otherwise attendance at the Centre is usually for four days, plus the examination day. Examinations for CCASBNM take place twice per year, usually on a Friday in May and October. It is important to check on the local arrangements for the examination.

Assessment

To obtain a Certificate, a candidate is required to;

- 1) Pass one or both parts of a written examination (depending on prior qualification)
- 2) Produce a competent report following a practical test.

The written examination papers are set by the Chief Examiner, who is responsible to the CCASBNM Committee. Members of the Committee review and moderate the marking of all papers at their meetings held shortly after each course.

The detailed logistical arrangements for the practical test and report submission are made by the Accredited Centre. However the requirements for the practical test and the report are overseen by the CCASBNM Committee.

Course Content and Approximate Timings

One-Day Refresher Course (and final day of three/four day course)

Subject matter	Time Allocation
Introduction to the provisions of the legislation and its aims and objectives	1 hour
Explanation of measurement procedure including explanation of derivation of permitted levels. Potential issues in relation to sound insulation. Specification and use of instrumentation	1.5 hour
Simulated Measurement Exercise	1.5 hour
Review of procedure for serving of EPA Section 80 notices	1 hour
Revision and overview	0.5 hour
Assessment – written paper	1.5 hour
Total	7 hours

Three/Four Day Course

Subject matter	Time Allocation
<p>Sound pressure level, sound power level and the decibel scale.</p> <p>The range of decibel levels and the significance of level changes (3dB, 10dB, 20dB, etc) in terms of energy content and loudness. Pure tones, frequency, the audio range, broadband noise and octave band frequency analysis of broadband noise</p> <p>The procedure for combining and subtracting decibel levels including background levels. The variation of hearing sensitivity with frequency and the A-weighting scale. Steady and time-varying noise levels. LAeq, SEL and exceedance levels LA10, LA90, etc. Rating measures, NR curves.</p> <p>The effects (including non-auditory) of noise on people. Physiological hearing damage. Annoyance. Activity. Activity interference. Sleep disturbance. (To include demonstrations of sounds of equal A-weighting level but different frequency content and the subsequent perception of the sound).</p>	0.5 day (3.5 hours)
<p>Types of sound level meters for measurement of steady noise levels. Integrating averaging sound level meters for the measurement of time varying noise and environmental analysers for LA10 and LA90 measurements, etc. Time weighting ('Fast', 'Slow' and 'Peak' averaging times) and frequency weighting (dB (A), flat or linear). Types of microphone and their directionality. Accuracy of Class 1 and 2 instruments. Field and laboratory calibrations of sound level meters, including traceability.</p> <p>Use of data recorders. Demonstrations of use of sound level meters and data recorders, hands-on use of sound level meters in measuring set sources within class and use of data recorders. Recording meter settings during use of meters.</p> <p>The use of sound level meters. Choice of microphone position.</p> <p>The influence of screening and reflecting surfaces.</p>	0.5 day (3.5 hours)
<p>Introduction to the provisions of the legislation and its aims and objectives</p>	1.5 hours
<p>Explanation of measurement procedure including explanation of derivation of permitted levels. Specification and use of instrumentation.</p>	2 hours
<p>Simulated Measurement Exercise - practice</p>	0.5 hour (during a half-day)
<p>Principles involved in establishing noise nuisance. Use of EPA and case law. Procedure for serving of EPA Section 80 notices. Potential issues with poor sound insulation.</p>	4 hours
<p>Revision and overview</p>	1 hour
<p>Written assessment</p>	2.5 hours
<p>Total</p>	18.5 hours

*The assessment includes (i) an observed thirty-minute simulated measurement (ii) a sixty-minute written paper for candidates without prior qualification, and (iii) a ninety-minute written paper sat by all candidates.