Certified Calibration Technician (CCT) Requirements

The Certified Calibration Technician tests, calibrates, maintains, and repairs electrical, mechanical, electromechanical, analytical, and electronic measuring, recording and indicating instruments and equipment for conformance to established standards.

Work Experience

Candidates must have worked in a full-time, paid role. Paid intern, co-op or any other course work cannot be applied toward the work experience requirement.

Candidates must have five years of on-the-job experience in one or more of the areas of the Certified Calibration Technician Body of Knowledge.

Education

Candidates who have completed a degree from a college, university or technical school with accreditation accepted by ASQ will have part of the five-year experience requirement waived, as follows (only one of these waivers may be claimed):

- Diploma from a technical, military, or trade school — two years waived
- Associate degree — two year waived
- Bachelor's degree — two years waived
- Master's or doctorate — two years waived

Degrees/diplomas from educational institutions outside the United States must be equivalent to degrees from U.S. educational institutions.

Expectations

The minimum expectations of a Certified Calibration Technician.

- Will be able to distinguish between base and derived International System units and how to apply, convert, and use them, and will be able to use inspection, measurement, and test equipment (IM&TE) to measure various factors. Will understand the principles and hierarchy of standards and the importance of traceability. Will be able to select appropriate standards to use based on measurement requirements, equipment availability, and specifications.
- Will be able to use measurement methods, distinguish between measurement characteristics, and correct for various error sources. Will be able to apply IM&TE specifications and their characteristics, and will understand measurement assurance program (MAP) concepts.
- Will know the components of calibration procedures and be able to use common calibration methods, both manual and automated, while complying with regulations and industry practices. Will recognize the impact environment can have on calibration, and will understand calibration and validation processes for IM&TE. Will know how to manage records and maintain document control systems that support calibration and measurement systems.
- Will understand basic measurement uncertainty terms and will be able to understand the steps in developing an uncertainty budget to calculate uncertainty. Will be able to apply technical mathematics and basic statistical techniques in support of these systems.
- Will be able to distinguish between quality system components and will recognize the methods and tools used to develop, improve, and review a quality management system, as recommended by various quality standards and guidances. Will be able to apply quality control tools, identify nonconformances and assess their potential impact, and understand quality auditing processes and document requirements. Will understand safety requirements, including how to identify potential hazards and when to use personal protective equipment.