

## ACI Laboratory Technician Certification Programs: Concrete Laboratory Testing Technician—Level 2

### Definition:

A **Concrete Laboratory Testing Technician—Level 2** is an individual who has demonstrated the knowledge and ability to properly perform, record, and report the results of advanced laboratory procedures for aggregates and concrete.

### Scope and Knowledge

The program requires a working knowledge of the following ACI and ASTM documents:

- ACI 214 - Evaluation of Strength Test Results of Concrete \*
- ACI 211.1 - Selecting Proportions for Concrete \*
- ASTM C192/C192M - Making and Curing Concrete Test Specimens in the Laboratory [This standard also requires the knowledge and ability to perform ASTM C143 (Slump), C173 and C231 (Air Content), C138 (Unit Weight), and C1064 (Temperature).]
- ASTM C470/C470M - Molds for Forming Concrete Test Cylinders Vertically \*
- ASTM C496/C496M - Splitting Tensile Strength of Cylindrical Concrete Specimens \*
- ASTM C42/C42M - Obtaining and Testing Drilled Cores and Sawed Beams \*
- ASTM C157/C157M – Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete

\* Written exam only

### Certification Requirements

ACI will grant certification only to those applicants who meet all of the following requirements:

1. Have at least one year (2000 hours) of approved work experience or a combination of work experience and education, AND
2. Hold current certification as an ACI Concrete Laboratory Testing Technician—Level 1, and
3. Obtain a passing grade on the ACI written examination, AND
4. Successfully complete the ACI performance examination.

The two-hour written examination is open-book and consists of approximately 75 multiple choice questions. There are between eight and twelve questions on each of the documents. To pass the written examination, both of the following conditions must be met:

1. At least 60% correct for each of the required standards, AND
2. A minimum score of 70% overall.

The performance examination is closed-book and requires actual demonstration of ASTM Practice C192/C192M and C157/C157M. The examinee is judged on his/her ability to correctly perform all of the required steps for each standard procedure. Recertification is necessary every five years, and requires successful completion of both the written and performance examinations.