

Comparison of HCMT & HCMCT Certifications

What is ACI?

Founded in 1904, the American Concrete Institute (ACI) is an international organization devoted to the education, training, certification, and technical documents development of guidelines and standards pertaining to concrete. There are 94 local chapters, 244 student chapters, and more than 30,000 members spanning over 120 countries. Some of the more popular publications include ACI 318 on the specifications of the structural concrete building code and ACI 211 on guidelines for a concrete mixture design.

How many ACI certifications are there?

The ACI certifications program offers +30 certifications currently. These certifications are grouped under the testing certification program, Inspection certifications program, or construction/specialist program. The goal is to evaluate a person's knowledge of a subject, minimal competency, and/or skill to complete task. The most popular ACI certification has been ACI field grade 1 certification, which involves sampling and testing of fresh concrete on a field project. There are also ACI certifications involving concrete construction floor finishing practices, shotcrete, and installing anchor bolts.

Does the HCMT Program offer ACI Certifications?

The HCMT program only offers HCMT certifications. The ACI certifications are offered through a local sponsoring group approved by the national ACI certifications committee. The ORMCA is the current sponsoring group for the state of Oklahoma.

Are the HCMT certifications & ACI certifications the same?

Both of these organizations have different focuses, but similar standards. The HCMT certifications are based on ODOT specifications for sampling and testing concrete, aggregates, asphalt, and soils. The ODOT procedures for sampling and testing are generally based on AASHTO standards where ACI will use ASTM standards. The American Concrete Institute (ACI) does provide certifications focusing on a wide range of concrete testing procedures and concrete practices, but the ACI does have a basic aggregate testing certification.

Are there any similar certifications between ACI & HCMT?

There are a few certifications within HCMT that have similarities to ACI certifications as shown in Table 3. The HCMT program will accept the ACI certification of a person on a test-by-test basis pertaining to a HCMT certification. However, as partial as part of the individual current ACI results from some of these ACI certifications based on the individual test of these ACI certifications.

- 1.) **ACI Field Grade 1** – As shown in Table 2 the HCMT certification for concrete is similar to ACI Field Grade 1 certification, but the HCMT requires a Type B calibration and breaking concrete cylinders for compressive strength testing, but only requires the volumetric “roll-a-meter” as an alternative to the Type B meter to measure air content of fresh concrete. The ACI field grade 1 certification requires both volumetric “roll-a-meter” and Type B as part of the certification.
- 2.) **ACI Concrete Strength Testing Technician** - The ACI strength certification has the same compressive strength test components of preparing cylinders, capping or unbonded capping of cylinder, and breaking the cylinder, but ACI strength certification also requires flexural strength testing. The HCMT certification for concrete does not require flexural strength testing of concrete. However, in the HCMT training sessions prior to certification of concrete, the instructor does discuss making and breaking flexural beams.
- 3.) **ACI Aggregate Testing Technician Level 1** - The aggregate certifications of HCMT is similar to the ACI aggregate certification. The difference is the HCMT doesn't require specific gravity, absorption, or organic impurities testing as part of the aggregate HCMT certification. However, HCMT has discussed adding this specific gravity and absorption testing to the aggregate HCMT certification.

Table 1. Compares Similar HCMT Certifications and ACI Certifications on Performance

HCMT Certification	ACI Certification	Differences Between Certifications
Concrete	Field Grade 1	HCMT requires a Type B calibration and breaking concrete cylinders for compressive strength testing, but only requires the volumetric “roll-a-meter” as an alternative to the Type B meter. ACI field grade 1 certification requires both volumetric “roll-a-meter” and Type B as part of the certification.
Concrete	Concrete Strength Testing Technician	HCMT has both unbonded capping (neoprene pads) and breaking of cylinders. It does not require flexural strength testing or other cylinder capping methods.
Aggregate	Aggregate Testing Technician Level 1	HCMT doesn’t require specific gravity, absorption, or organic impurities testing.

Table 2. Compares HCMT Concrete Certification and ACI Field Grade 1 Certification Performance

Procedure	HCMT Concrete Certification	ACI Field Grade 1 Certification	ACI Field Grade 1 & Strength Testing Certification
Sampling	✓	✓	✓
Slump	✓	✓	✓
Temperature	✓	✓	✓
Unit Weight	✓	✓	✓
Type B Meter	✓	✓	✓
Type B Calibration	✓	No	No
Volumetric Meter	✓	✓	✓
Making & Curing Cylinders	✓	✓	✓
Breaking Cylinders	✓	No	✓

HCMT Written exam between ACI

Person will still need to complete any sections of an written exam pertaining to any content not covered by the ACI written or performance exam. For example, if person is ACI Field Grade 1 certified, then they will still need to complete the strength parts and Type B calibration (at least 70% on each of these sections).

Performance exam between ACI & HCMT?

Person will still need to complete any sections of an performance exam pertaining to any content not covered by the ACI written or performance exam.