



MoDOT Technician Certification Program

Certification Courses Rev:04/22/2022

Figure 2

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Aggregate Technician (AT)

Cost: \$600.00 First Time, \$300.00 Renewal

PDH hours 9

No Prerequisite **Location: State Tech. College, Linn MO** 2 Days - First Time, ½ Day – Renewal

(First Time Only)

- AASHTO R90 Sampling of Aggregates
- AASHTO R76/ASTM C 702 Reducing Samples of Aggregate to Testing Size
- AASHTO T 11/ASTM C 117 Materials Finer than No. 200 by Washing
- AASHTO T 27/ASTM C 136 Sieve Analysis of Fine and Course Aggregates
- AASHTO T 255/ASTM C 566 Total Moisture Content of Aggregates by Drying
- MoDOT TM 71 Deleterious Content of Aggregate
- ASTM D 4791 Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregates
- AASHTO T 84/ASTM C 128 Specific Gravity and Absorption of Fine Aggregate
- AASHTO T 85/ASTM C 127 Specific Gravity and Absorption of Coarse Aggregate
- MoDOT TM 81 Specific Gravity and Absorption of Aggregate Using Automatic Vacuum Sealing Method (Informational Only)

Bituminous Technician (BT)

Cost: \$500.00 First Time, \$250.00 Renewal

PDH hours 9

No Prerequisite **Location: State Tech. College, Linn MO** 2 Days - First Time, ½ Day – Renewal

(First Time Only)

- AASHTO R66 Sampling Asphaltic Materials
- AASHTO R97 Sampling Asphaltic Paving Mixtures
- AASHTO R 47 Reducing Samples of Asphalt Mixtures to Testing Size
- AASHTO T 329 Moisture Content of Asphalt Mixtures by Oven Method
- MoDOT TM 54 Determining Asphalt Content of a Bituminous Mixture by Nuclear Method
- AASHTO T 166 & T 331 Bulk Specific Gravity of Compacted Bituminous Material
- AASHTO T 269/ASTM D 3203 Percent Air voids in Compacted Dense and Open Bituminous Paving Mixtures
- MoDOT TM 20 Measurement of Air, Surface or Bituminous Mixture Temperature

Soil Density (SD)

Cost: \$500.00 First Time, \$250.00 Renewal

PDH hours 9

No Prerequisite **Location: State Tech. College, Linn MO** 2 Days - First Time, ½ Day – Renewal

(First Time Only)

- AASHTO T 265 Laboratory Determination of Moisture Content of Soils
- AASHTO T 99 Moisture-Density Relations of Soils
- MoDOT TM 40 A One-Point Moisture-Density Relations Test for Soils
- AASHTO T 310 Density and Moisture Content of Soil and Soil Aggregate by Nuclear Methods (Shallow Depth)
- MoDOT TM 35 Moisture Offset Factor for a Nuclear Gauge

Concrete Field (CF)

Cost: \$500.00 First Time, \$250.00 Renewal

PDH hours 9

No Prerequisite **Location: State Tech. College, Linn MO** Day 1 of 2 - First Time, ½ Day – Renewal

(First Time Only)

- MoDOT TM20 Measurement of Air, Surface or Bituminous Mixture Temperature
- AASHTO R60/ASTM C 172 Sampling of Freshly-Mixed Concrete
- ASTM C 1064 Temperature of Freshly-Mixed Portland Cement Concrete
- AASHTO T 119/ASTM C 143 Slump of Hydraulic Cement Concrete
- AASHTO T 152/ASTM C 231 Air Content of Freshly-Mixed Concrete by the Pressure Method
- AASHTO T 23/ASTM C 31 Making and Curing of Concrete Cylinder Specimens in the Field
- AASHTO T121M/ASTM C138 Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- AASHTO T196M/ASTM C173 Test for Air Content of Freshly Mixed Concrete by the Volumetric Method
- AASHTO T 23/ASTM C 31 Making and Curing of Concrete Beam Specimens in the Field

Concrete Strength (CS)

Cost: \$500.00 First Time, \$250.00 Renewal

PDH hours 4

No Prerequisite **Location: State Tech. College, Linn MO** 1 Day - First Time, ½ Day – Renewal

(First Time Only)

- AASHTO T 24/ASTM C 42 Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
- AASHTO T 148/ASTM C 174 Measuring Length of Drilled Concrete Cores
- AASHTO T 231/ASTM C 617 Capping Cylindrical Concrete Specimens
- ASTM C1231 Use of Unbounded Caps in Determination of Compressive Strength of Hardened Cylindrical Concrete Specimens
- AASHTO T 22/ASTM C 39 Compressive Strength of Cylindrical Concrete Test Specimens
- AASHTO T97/C78 Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)

Plasticity Index (PI)

Cost: \$250.00 First Time, \$250.00 Renewal

PDH hours 4

No Prerequisite **Location: State Tech. College, Linn MO** 1 Day - First Time, ½ Day – Renewal

(First Time Only)

- MoDOT TM 79 Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test Particle Size Analysis of Soils (Aggregate Specific)
- AASHTO T 89 Determining the Liquid Limit of Soils (Aggregate Specific)
- AASHTO T90 Determining the Plastic Limit and Plastic Index of Soils (Aggregate Specific)



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Figure 2

[\(Figure 1\)](#)

International Roughness Index (IRI) Profile

Cost: \$250.00

PDH hours 4

No Prerequisite

Location: State Tech. College, Linn MO

1 Day

(First Time Only)

MoDOT TM 59

Determination of the Surface Profile using the International Roughness Index

Superpave QC/QA (SP) STC

Cost: \$1100.00 First Time,

\$625.00 Renewal

PDH hours 36

Prerequisite requirements: Aggregate Technician & Bituminous Technician

5 Days - First Time, 2 Day – Renewal (First Time Only)

Location: TBA

AASHTO T 209

Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt (HMA)

AASHTO T 312

Preparing and Determining the Density of HMA Specimens by Means of the Superpave Gyrotory Compactor

AASHTO T 308

Determining the Asphalt Binder Content of HMA by the Ignition Method

AASHTO R 30

Standard Practice for Mixture Conditioning of HMA

Practice for Superpave Volumetric Design for HMA

Standard Specification for Superpave Volumetric Mix Design

Plant Operation

Intro to Superpave

Temperature-Viscosity Relations

Field Verification

Job Mix Formula (JMF) Interpretation

Volumetrics

HMA QC Plan

Pay Factor Theory, QC/QA

Record Keeping, QC/QA

Contract Administration

HMA Aggregate (Consensus Tests) (HMA)

Cost: \$300.00

PDH hours 4

Prerequisite requirements: Aggregate Technician

Location: TBA

1 Day

AASHTO T 176

Plastic Fines in Graded Aggregates and Soils by the Use of the Sand Equivalent Test

AASHTO T 304

Un-compacted Void Content of Fine Aggregate

ASTM D 5821

Standard Test Method for Determining the Percentage of Fractured Particles in Course Aggregates

TSR

Cost: \$300.00

PDH hours 4

Prerequisite requirements: Superpave QC/QA

Location: TBA

1 Day

AASHTO T 283

Resistance of Compacted Asphaltic Mixtures to Moisture Induced Damage

Binder Ignition (BI)

Cost: \$300.00

PDH hours 4

Prerequisite requirements: Aggregate Technician & Bituminous Technician

Location: TBA

1 Day

AASHTO T 308

Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method

Field Density (FD)

Location: MODOT Central Lab Jefferson City

Cost: \$250.00

PDH hours 4

Prerequisite requirements: Aggregate Technician

1 Day

AASHTO T 310

Density and Moisture Content of Soil and Soil Aggregate by Nuclear Methods (Shallow Depth)

MoDOT TM 35

Moisture Offset Factor for a Nuclear Gauge

Compressive Strength (CS)

Location: MODOT Central Lab Jefferson City

Cost: \$100.00

PDH hours 2

Prerequisite requirements: Aggregate Technician

1 Day

AASHTO T 231/ASTM C 617

Capping Cylindrical Concrete Specimens

ASTM C1231

Use of Unbounded Caps in Determination of Compressive Strength of Hardened Cylindrical Concrete Specimens

AASHTO T 22/ASTM C 39

Compressive Strength of Cylindrical Concrete Test Specimens