



MoDOT Technician Certification Program

Certification Courses

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Figure 2

TCP Courses Given by State Technical College of Missouri (STC) updated: 08/05/2019

Aggregate Technician

Cost: \$550.00 First Time, \$275.00 Renewal

PDH hours 9
(First Time Only)

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

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

Bituminous Technician

Cost: \$550.00 First Time, \$275.00 Renewal

PDH hours 9
(First Time Only)

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

AASHTO R66 Sampling Bituminous Materials

AASHTO R97 Sampling Bituminous Paving Mixtures

AASHTO R 47 Reducing Samples of HMA 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) (Note: If all you do is field work you could do FD instead) **Cost: \$550.00 First Time, \$275.00 Renewal**

PDH hours 9
(First Time Only)

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

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/*Advanced Concrete **Cost: \$550.00 First Time, \$375.00 Renewal – (\$375 till 2022)**

PDH hours 9
(First Time Only)

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

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

*Advanced Concrete

(*Prerequisite Concrete Field) Location: State Tech. College, Linn MO Day 2 of 2 - First Time, ½ Day – Renewal

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

Cost: \$275.00 First Time, \$275.00 Renewal

PDH hours 4
(First Time Only)

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

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)



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Plasticity Index

Cost: \$275.00 First Time, \$275.00 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)		

International Roughness Index (IRI) Profile

Cost: \$275.00

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		

TCP Courses Given by Missouri University of Science & Technology

Superpave QC/QA

Location: S&T Rolla MO

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)
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 Gyratory 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	
	Random Sampling	

HMA Aggregate (Consensus Tests)

Cost: \$300.00

PDH hours 4

Prerequisite requirements: Aggregate Technician	Location: S&T Rolla MO	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: S&T Rolla MO	1 Day
AASHTO T 283	Resistance of Compacted Bituminous Mixtures to Moisture Induced Damage	

Binder Ignition

Cost: \$300.00

PDH hours 4

Prerequisite requirements: Aggregate Technician & Bituminous Technician	Location: S&T Rolla MO	1 Day
AASHTO T 308	Determining the Asphalt Binder Content of HMA by the Ignition Method	



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TCP Courses Given by MoDOT Central Lab

Aggregate Specific Gravity Location: MODOT Central Lab Jefferson City **Cost: \$250.00** **PDH hours 4**
Prerequisite requirements: Aggregate Technician 1 Day

- 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)

T 85 Absorption Location: MODOT Central Lab Jefferson City and on the road **Cost: \$100.00** **PDH hours 2**
Prerequisite requirements: Aggregate Technician ½ Day

- AASHTO T 85/ASTM C 127 Specific Gravity and Absorption of Coarse Aggregate *with Emphasis on Absorption*

Low Slump (Currently not available) Location: MODOT Central Lab Jefferson City **Cost: \$250.00** **PDH hours 4**
Prerequisite requirements: Concrete Field 1 Day

- MoDOT TM 36 Nuclear Density of Concrete Overlays
- Volumetric Batched and Continuous Mixed Concrete Plant Calibration

Field Density (FD) (Note: FD is the 2nd half of Soil Density – Field work only) **Cost: \$250.00** **PDH hours 2**

- No Prerequisite Location: MODOT Central Lab Jefferson City 1 Day
- AASHTO T310 Density and Moisture Content of soil and Soil Aggregate by Nuclear Methods (Shallow Depth)
- AASHTO TM 35 Moisture Offset Factor for a Nuclear Gauge
- Gauge Operation: Principles, Safety, Security & Emergency Procedures

***Compressive Strength** Location: MODOT Central Lab Jefferson City **Cost: \$100.00** **PDH hours 2**
No Prerequisite ½ 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
- (*Prestress/Precast personnel only)