

# NDDOT TECHNICAL CERTIFICATION PROGRAM (TCP)

## SOILS FIELD TESTING

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### 2021 Certification Season

#### SCHEDULE

The following is a list of courses offered for Soils Field Testing certification. The courses are offered through the North Dakota Department of Transportation. Test Out and Renewal are the same course.

Testing out is encouraged for individuals with soil testing experience. Due to the continuing COVID-19 related restrictions all classes will be held virtually using Microsoft Teams. Exams will be completed online. Performance exams will be scheduled and completed virtually. *More details will be added to this document after today (1/4/2021)*

#### NEW CERTIFICATION

**March 4** – Microsoft Teams Meeting - 9 am start time

**March 8** – Microsoft Teams Meeting - 9 am start time

#### TEST OUT OR RENEWAL

**March 15** - Microsoft Teams Meeting - 9 am start time

Additional dates will be added if needed.

#### OVERVIEW

Soils Filed Testing is a course intended for individuals that test soil on construction projects or in a lab as part of their daily job responsibilities. All courses require an exam and performance exam. For the 2021 season the exam and performance exam will be completed using Microsoft Teams.

The Test Out/Renewal provides a *very brief* overview of tests, specification updates and forms as well as an online exam and virtual performance exam.

Individuals requesting Renewal or Test Out are expected to familiarize themselves with the test procedures, specifications and sampling and testing manual **before** attending. Prior test experience is strongly suggested.

Students registering for a new certification course will be directed to self-paced online training modules on the test procedures (*see page 3*), YouTube videos of test procedures and a live (virtual) presentation. The live presentation will include an overview of tests, specifications, worksheets used and a Q&A session. An online exam and performance exam are included. The performance exam may be scheduled for the class date or soon after.

Certification is valid for 5 years.

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#### COURSE SYLLABUS

# NDDOT TECHNICAL CERTIFICATION PROGRAM (TCP)

## SOILS FIELD TESTING

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Soil Tests  
Worksheets and Forms  
Basics Soil Inspection  
Specifications, Relevant Portions of Sections 200 and 700  
    Supplemental Specifications  
Field Sampling and Testing Manual, Sections 200 and 704

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### THE TESTS THAT WILL BE COVERED

ND T 99 & 180 - Moisture-Density Relations of Soils  
ND T 191 - Density In-Place by the Sand Cone Method  
ND T 217 - Determination of Moisture in Soil by Means of Calcium Carbide Gas Pressure Moisture Tester (Speedy)  
ND T 265 - Laboratory Determination of Moisture Content of Soils  
ND D 2167 - Density of Soil in Place by the Rubber-Balloon Method  
ND D 4643 - Microwave Method of Drying Soils

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### MINIMUM REQUIREMENTS

Basic Math Skills  
Calculator (cell phone calculator will not be allowed for exam)

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### WORK EXPERIENCE

Experience and knowledge of construction projects and processes is beneficial and recommended. It is highly recommended that individuals requesting certification have soil testing experience.

### CERTIFICATION REQUIREMENTS

Attending a course or testing out, a (virtual) written exam and a (virtual) performance exam.

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### WHO CAN TEST OUT?

- Individuals with current similar certifications from another state
- Individuals with recent on-the-job training for soils testing.
- No experience? Individuals that do not have prior testing experience but complete all associated self-paced online modules and submit a copy of their learning record.
  - The modules may be found on the Upper Great Plains Transportation Institute website

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### TEST OUT APPLICATION

An application for Test Out must be submitted. If approved a test-out time may be scheduled online. The Test Out request form may be found on the TCP web page under the **Resources** tab, or by clicking [this link](#):

### RECIPROCITY

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Acceptance of certification from other states is not offered for Soils Field Testing certification.

### REGISTRATION FEE

There is not cost for registration.

Please keep in mind this course is intended for individuals that will run tests. Space is limited.

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### REGISTER ONLINE

To register for this course [click this link](#) or go to the registration link found on the NDDOT TCP web page under the tab labeled ***Certification Classes***.

### INSTRUCTORS

Curt Dunn, Grand Forks District Materials Coordinator

Mark Riley, Fargo District Construction

### RESOURCES

#### Class Manual

A recent copy of the course manual is available from the TCP web page or by [clicking this link](#):

#### Field Sampling and Testing Manual

<http://www.dot.nd.gov/divisions/materials/testingmanual.htm>

#### *ND Standard Specification for Road and Bridge Construction and Supplemental Specifications*

<https://www.dot.nd.gov/dotnet/supplspecs/StandardSpecs.aspx>

**YouTube** (videos of each test included in the Soils Field certification)

<https://www.youtube.com/channel/UCpsELE5FYuwvmrioZZTzU1Q>

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### ONLINE LEARNING MODULES - UGPTI

Self-paced online modules are available. Completing the online modules does not provide certification but provides a thorough overview of the tests. **For the 2021 season you will be expected to complete the modules and then provide a learning record (transcript) to prove completion.**

Microwave Oven Drying Soils (1 hr.)	D 4643
Proctor Test (1 hr.)	T 99 T 180
Rubber Balloon Test (1 hr.)	D 2167
Sand Cone Test (1 hr.)	T 191
Soil Moisture Density Test (Intro) Optional to complete	
Speedy Moisture Test (1 hr.)	T 217

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The modules are found at the Learning Management System (LMS) at Upper Great Plains Transportation Institute (UGPTI). The modules were created for a new student with little to no field experience. Users will need to request a new account – which can take a couple of days to set up.  
<http://www.translearning.org/>

### CONTACT

Questions: [dotmaterials@nd.gov](mailto:dotmaterials@nd.gov)  
701-328-6937

NDDOT TCP Web Link  
<http://www.dot.nd.gov/divisions/materials/techniciancertification.htm>